MCWP 4-11.9

Combat Cargo Operations
(Final Author's Draft)
22 Jun 2001

U.S. Marine Corps
DEPARTMENT OF THE NAVY
Headquarters United States Marine Corps
Washington, DC 20380-0001

XX Oct 2000

FOREWORD

1. PURPOSE. Marine Corps Warfighting Publication (MCWP) 4-11.9, *Combat Cargo Operations*, addresses the fundamental principles of combat cargo operations aboard amphibious ships. This manual addresses the techniques and procedures of amphibious embarkation, well deck and flight deck operations, and ship-to-shore movement. This publication also provides an overview of LFORM and landing force space administration as well as the duties and responsibilities of combat cargo personnel.

2. SCOPE. MCWP 4-11.9 provides a broad overview for commanders and their staffs, to familiarize them with the accepted and practiced techniques and procedures involved in combat cargo operations. The information contained in this MCWP is also intended to assist the landing force in the planning and execution of amphibious embarkation/debarkation operations. This manual is also intended to serve as a guidebook for personnel assigned combat cargo billets.

3. SUPPRESSION. None.

4. CHANGES. Recommendations for improvements to this publication are encouraged from commands as well as from individuals. Forward suggestions using the User Suggestion Form format to:

Commanding General
Doctrine Division (C 42)
Marine Corps Combat Development Command
3300 Russell Road, Suite 318A
Quantico, VA 22134-5021

5. CERTIFICATION. Reviewed and approved this date.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

Lieutenant General, U.S. Marine Corps
Commanding General
Marine Corps Combat Development Command
Quantico, Virginia

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User Suggestion Form

From:

To: Commanding Officer, Doctrine Division (C 42), Marine Corps Combat Development Command, 2042 Broadway Street Suite 210, Quantico, Virginia 22134-5021

Subj: RECOMMENDATIONS CONCERNING MCRP 4-11.9, COMBAT CARGO OPERATIONS

1. In accordance with the foreword to MCWP 4-11.9, which invites individuals to submit suggestions concerning this MCWP directly to the above addressee, the following unclassified recommendation is forwarded.

Page Article/Paragraph No. Line No. Figure/Table No.

Nature of Change: ☐ Add ☐ Delete ☐ Change ☐ Correct

2. Proposed new verbatim text: (Verbatim, double-spaced; continue on additional pages as necessary.)

3. Justification/source: (Need not be double-spaced.)

Note: Only one recommendation per page.

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TABLE OF CONTENTS

TABLE OF CONTENTS

CHAPTER I

INTRODUCTION

1. **General**. This chapter provides an overview of the duties and responsibilities of the ship's Combat Cargo Officer (CCO), and an organizational perspective.

2. **Combat Cargo Officer Duties and Responsibilities Overview**.

a. The ship's CCO is the member of the ship's crew complement corresponding to the Team Embarkation Officer (TEO). Each major ship of the amphibious force normally has aboard a Marine Officer assigned to this duty. Ships with Combat Cargo Officer billets include the general-purpose amphibious assault ship (LHA), multi-purpose amphibious assault ship (LHD), amphibious transport dock (LPD) and landing ship dock (LSD-49 Cargo Variant). On other amphibious ships, such as the landing ship dock (LSD, 36/41), where no Marine Combat Cargo Officer is provided, a Naval officer, normally the ships First Lieutenant, performs this function.

b. The CCO functions as a special staff officer to the naval unit commander, under the cognizance of the Executive Officer/Chief Staff Officer and on a co-equal basis with the commands other Department Heads. Combat cargo personnel are under the administrative control (ADCON) of EWTGLANT/PAC or Marine Barracks, Yokosuka, Japan. For ease of interpretation, the terms Combat Cargo Officer and Combat Cargo Assistant are synonymous as are the terms Commanding Officer and Commander or Executive Officer and Chief Staff Officer.

c. The CCO is responsible for coordination with embarked units and appropriate Department Heads/Staff Officers in the preparation and execution of plans for the embarkation or debarkation of landing force personnel, supplies and equipment. This includes assisting in the development of billeting and messing plans. It is important to note that the Combat Cargo Officer is not responsible for landing force space maintenance, and upkeep; the ship's Division Officer's are responsible for these actions. Additionally, the Combat Cargo Officer shall perform liaison with embarking units as prescribed by the Commanding Officer.

d. The CCO is a member of the ship's company or staff and as such maybe assigned additional duties. The CCO should not be assigned watches or additional/collateral duties that interfere with the proper performance of his duty, especially during operations. The CCO's primary duties are coordinating, planning, and obtaining information from the embarking forces prior to actual embarkation and debarkation evolutions.

e. The CCO's involvement in Landing Force Operational Reserve Material/Mission Load Allowance (LFORM/MLA) is that of a manager, not a custodian. The Combat Cargo Officer's active involvement is essential to ensure the proper stowage, security, inspection and serviceability of these assets. This CCO's managerial involvement provides the Commanding Officer a system of checks and balances by providing executive oversight and by serving as an inspector to ensure accountability and serviceability. The CCO should have access to all ship's cargo, vehicle, and ammunition stowage areas as well as the associated cargo documentation in order to perform his/her duties.

3. **Combat Cargo Officer Organizational Structure**. The Marine Corps provides trained personnel to perform combat cargo duties at four different levels of command. These four levels, and their general duties, are outlined in the following paragraphs.

a. Force Combat Cargo Officer/Amphibious Plans Officer (COMNAVSURFLANT/ COMNAVSURFPAC)

(1) Is the assistant Force Marine Officer and shall act as the Force Marine Officer in his absence.

(2) Acts as the staff advisor for all matters pertaining to loading and offloading of landing force personnel, supplies and equipment.

(3) Monitors the Landing Force Operational Reserve Materiel (LFORM) program.

(4) Monitors amphibious ship building, overhaul and conversion programs through close liaison and coordination with the appropriate Assistant Chief of Staff (ACOS).

(5) The principle advisor for characteristics of amphibious ships, landing craft, amphibious vehicles as well as their loading and offloading characteristics.

(6) Exercises staff supervision over all assigned Combat Cargo Officers and their enlisted Assistants.

(7) Maintains liaison with higher, adjacent, and subordinate commands on force plan development and maintenance for amphibious operations.

(8) Maintains liaison with amphibious type desk managers regarding landing force spaces.

(9) Conducts review of operation plans and orders associated with landing force and amphibious matters.

(10) Monitors and makes recommendations for Preparation for Overseas Movement (POM) initiatives pertaining to amphibious ships and landing craft.

(11) Conducts review of the Force task organization, missions, tasks, functions and command relationships of amphibious commands.

(12) Represents COMNAVSURFLANT/COMNAVSURFPAC at amphibious planning conferences.

(13) Serves as the COMNAVSURFLANT/COMNAVSURFPAC representative for amphibious matters during inspections and crew certifications.

(14) Coordinates Opportune Lift (OPLIFT) requirements as required.

b. Group Combat Cargo Officer (COMPHIBGRU ONE/TWO/THREE):

(1) Advises and assists the transport group commander in matters concerning the loading and offloading of all landing force personnel, supplies and equipment.

(2) Acts as liaison officer between the transport group commander and the embarkation group commander.

(3) Maintains a complete file of all amphibious ship characteristics and oversees the development of individual ship embarked troop regulations, LFORM Supplements, and Ship's Loading Characteristics Pamphlets (SLCP).

(4) Coordinates activities of transport unit combat cargo officers to include collecting the load plans of the transport group and maintaining up-to-date records of loading/offloading progress; compiling periodic reports as required by higher authority.

(5) Advises, coordinates, and directs the activities of ship and amphibious squadron combat cargo personnel relative to training, automated systems policy/standardization, and Marine administrative support.

(6) When required, coordinate Port Handling and Inland Transportation (PHIT) as requested by embarking units and amphibious ships. This may also involve the coordination of marshalling areas on Naval stations/bases.

c. Amphibious Squadron (PHIBRON) Combat Cargo Officer:

(1) Advises and assists his commander on all matters pertaining to the loading and offloading of Landing Force personnel, supplies and equipment.

(2) Acts as liaison officer between his commander and the corresponding embarking troop commander.

(3) Maintains an SLCP file for those amphibious ships within the squadron.

(4) Advises/coordinates the activities of assigned ship combat cargo personnel as it pertains to operational and embark/debark requirements.

(5) Reviews all onload/offload plans.

(6) Maintains a copy of all load plans of ships in the transport unit.

(7) During loading and offloading, compiles and transmits periodic reports to higher authority.

d. Ship's Combat Cargo Officer:

(1) Advises the commanding officer on plans for loading and offloading troop cargo; and plan for embarkation, billeting and messing troops.

(2) Prepares, corrects, maintains and distributes the SLCP, Embarked Troop Regulations, and LFORM Supplements.

(3) Establishes and maintains liaison with the embarkation team commander.

(4) Advises and assists the Team Embarkation Officer (TEO) in preparing the detailed loading and offloading plan.

(5) Provides the Embarkation Team Commander with a current inventory of USMC LFORM/MLA to include inspection dates, dates that Class I onload dates and their planned rotation dates, and the applicable lot numbers for Class I and V stocks.

(6) Supervises the loading and offloading of all landing force personnel, supplies and equipment.

(7) During the planning phase of an amphibious operation the CCO:

(a) Prepares, corrects, maintains, and distributes the LFORM Supplement using approved logistics automated information systems ensuring that LFORM/MLA are properly documented. These same systems will also be used to document AVCAL, IMRL, AGSE, CHE/MHE, and other ship's cargo/equipment planned for stowage in landing force designated spaces, to include the Flight Deck and Hangar Deck, are also properly documented and templated during the LFORM Supplement development process.

(b) Establish and maintain liaison with the Team Embarkation Officer (TEO).

(c) Advise and assist the TEO in preparing loading and offloading plans.

(d) Advise and assist in the development of billeting plans and landing force space apportionment while considering Naval Support Element (NSE) and ship's augmentation requirements.

(8) During the embarkation and rehearsal phase of an amphibious operation the CCO shall:

(a) Maintain continuous liaison with the Embarkation Team Commander through the TEO.

(b) Ensure that the loading/offloading plan is being followed and that required deviations are properly documented and approved by both the ship's Commanding Officer and Embarkation Team Commander.

(c) Monitor the landing force space turnover process to ensure that the ship's Division Officers and landing force representatives properly document all discrepancies.

(d) Keep the ship's Commanding Officer informed of the progress of loading and/or offloading.

(e) Advise the ship's Commanding Officer and Embarkation Team Commander of problem areas encountered during the rehearsal phase and recommend corrective action.

(f) Coordinate with the ship's First Lieutenant and Weapons Officer to ensure that Marine Corps LFORM and MLA are not inadvertently offloaded with other landing force material during training exercises or operations.

(9) During the offloading phase of an amphibious operation the CCO shall:

(a) Make frequent inspections to ensure that offloading is proceeding according to plan.

(b) Ensure that all items of cargo requested on a priority basis are expeditiously located and offloaded.

(c) In cooperation with the TEO, maintain data from which periodic loading/unloading progress reports are made and transmitted, as appropriate.

(d) Keep a record of boat and helicopter requirements, by number and type, necessary to complete unloading.

(10) The ship's CCO is not responsible for handling cargo, operating cargo-handling equipment, or for the cargo's safety and security in the cargo holds or vehicle stowage areas. The ship's First Lieutenant, his assistants, and deck division officers are responsible to the Commanding Officer of the ship for these details. The ship's Weapons Officer or Ordnance Officer, if so manned, is responsible to the Commanding Officer for cargo safety and security in ammunition stowage magazines and lockers.

4. **Ship's Internal Organization**. Combat cargo personnel should fully integrate themselves into the ship's crew and understand completely the ships organization. The following paragraphs are intended to highlight the typical command organization and the general duties each of these personnel. The ship's Standard Organization and Regulations Manual (SORM) provides detailed information on shipboard internal organization.

a. The Commanding Officer (CO) is the highest authority aboard the ship. All personnel aboard ship, including embarked personnel, are subject to his orders. All orders from the

Commanding Officer of the ship to embarked personnel will be transmitted through the Commanding Officer of Troops (COT).

b. The Executive Officer (XO) is the ship's second in command and direct representative of the CO when it comes to executing the ship's routine. The XO is especially concerned with the organization, health and sanitation, discipline, exercise and efficient condition of the crew. The XO normally performs the duties of Debarkation Control Officer during shipboard embarkation/debarkation evolutions.

c. The Operations Officer (OpsO) is the head of the Operations Department. The OpsO is responsible for the collection, evaluation, and dissemination of combat and operational information required for the assigned missions and tasks of the unit, and, except as may be responsibility of another officer, for all other matters related to unit operations and designated airborne aircraft. The OpsO is normally responsible to the Executive Officer for coordinating and developing the daily, weekly, and long-range schedules for the ship and embarked units.

d. The First Lieutenant is the head of the Deck Department and is responsible for supervising the employment of equipment associated with deck seamanship. Depending upon the class of amphibious warfare ship, the First Lieutenant may be required to act as the Combat Systems Officer, Weapons Officer or Combat Cargo Officer. Regardless, the First Lieutenant is responsible for ensuring that all ship's authorized vehicles, material handling equipment, cargo spaces, and lashing equipment is in proper working order. Additionally, the First Lieutenant is responsible for the preservation and cleanliness of the exterior of the ship, the operation and care of the ship's boats, and all other matters pertaining to deck seamanship. **NOTE**: On LHA/LHD class ships, the Aircraft Intermediate Maintenance Department (AIMD) is responsible for all organic aviation ground support equipment, material handling equipment (MHE), and the ship's authorized vehicles. Some LHA/LHD class ship's have placed the Ordnance Officer (Air Gunner) under the Air Department, in which case Air Department is responsible for the cargo holds and lashing equipment in those spaces assigned which are used to stow ordnance. On other ships the Ordnance Officer falls under Combat Systems, in which case Combat Systems assumes responsibility for the cargo holds and lashing equipment. Engineering ("A gang") and Electrical Division are responsible for the maintenance of the ship's conveyor and elevator systems.

e. The Chief Engineer (CHENG) is the head of the Engineering Department and is responsible for the operation and maintenance of all propulsion and auxiliary machinery, and damage control readiness. Additionally, upon request from other ships Department Heads, the CHENG accomplishes repairs beyond their capabilities.

(1) The Damage Control Assistant (DCA) is responsible, under the Chief Engineer , for establishing and maintaining an effective damage control organization and for supervising repairs to the hull and machinery except as specifically assigned to another department or division. The DCA trains the ship's repair party personnel in damage control, including fire fighting, emergency repairs and non-medical defense against nuclear, biological, and chemical warfare. The DCA is also responsible for the maintenance, operation, and repair of the ship's collection, holding, and transfer (CHT) system. During embarkation planning, the DCA is responsible for reviewing the ship's detailed load plans and providing the ship's Commanding Officer with a written assessment on the overall impact of the load on trim, stress, and stability.

(2) The Electrical Safety Officer is responsible to the Executive Officer for the conduct of an effective ship wide electrical safety program. The Electrical Safety Officer's duties include; electrical safety indoctrination of all ship's personnel (to include embarked personnel), spot checks of electrical equipment to ensure compliance with the safety program, conduct safety checks as required on all personal electrical tools, equipment, and devices (radios, computers, etc.) for use aboard ship. **NOTE**: The ship's Electronics Materials Officer (EMO) may be responsible for electrical safety for specific electronic equipment.

f. The Combat Systems Officer (CSO) is responsible for the supervision and direction of the employment of the unit's/ship's combat systems, including ordnance equipment. The CSO's duties include the operation, care, maintenance, and inspection of the armament, armament appurtenances, and magazine spaces. Additionally, the CSO is responsible for the procurement, care, handling, accounting, testing, stowage, and use of explosives, propellants, pyrotechnics, and nuclear weapons. The Ordnance Officer assists the Combat Systems Officer in these duties. The Ordnance Officer is responsible, under the Commanding Officer, for supervising the employment of ordnance equipment and equipment associated with deck seamanship, except for that ordnance or deck equipment specifically assigned to another department. On those classes of ships that do not have a Combat Systems Department, the ship's First Lieutenant will be assigned these duties with a Weapons Officer executing the day-to-day tasks. The Ordnance Officer is also responsible for ammunition management, accountability, and reporting and for the stowage of munitions in accordance with the combat cargo developed load plan.

g. The Supply Officer (SupO) is responsible, under the Commanding Officer, for procuring, receiving, storing, issuing, shipping, transferring, selling, accounting for, and, while in their custody, maintaining all stores and equipment for the command. The SupO's duties include the operation of the general mess, wardroom mess, ship's store, ship's laundry, disbursing, ship's barbershops, vending machines, as well as supervising all disbursing and postal operations.

h. The Air Officer (Air Boss) is responsible, under the Commanding Officer, for the supervision and direction of aircraft launching/landing operations, servicing and handling of all aircraft and unmanned aerial vehicles (UAVs). Assistants to the Air Officer who directly impact on combat cargo operations are the Flight Deck Officer, the Hangar Deck Officer, the Aviation Fuels Officer, the Aircraft Handling Officer, and for some ships the Ordnance Officer (Air Gunner).

i. Most amphibious ships will also have assigned Medical and Dental Officers who are responsible to the Commanding Officer for the administration of their respective health programs. Normally the Medical Officer also assists in the ship's hearing conservation and heat stress programs.

5. **Landing Force Integration**. The most significant shipboard challenge relates to landing force integration. Both the landing force and ship's company have perceptions as to why the other exists. For Navy personnel a common perception is that embarking troops are interlopers that will interrupt their daily routine and create long lines. Embarking troops, on the other hand, may view the Navy as a taxi service whose sole mission is to transport them to their destination. These false perceptions must be countered with a more realistic view. This is best accomplished by the CCO in his role as force integrator and facilitator. The CCO should indoctrinate the landing force and ship's company personnel on the others requirements and routines. This indoctrination will aid in the seamless transition from two separate and distinct entities into a cohesive military team.

a. One way to combat false perceptions may be to compare the ship to the garrison environment.

(1) The ship is a mobile base used to launch and support combat operations ashore.

(2) The embarking unit is the main armament of the ship.

(3) Troop living and administrative spaces are assigned to the embarking units by the ship in much the same manner as a Marine Corps Base assigns offices or barracks to a unit.

(4) Ammunition magazines are similar to the base ammunition supply points, but with more stringent requirements due to space limitations.

(5) Vehicle stowage areas are the ship's roads and parking lots. The ship's Commanding Officer establishes the traffic rules similar to a Base Commander.

(6) Cargo spaces are similar to the shipping and receiving warehouses at Base Supply.

(7) The Ship's Platoon and other shipboard augmentation requirements are similar to the personnel provided to a Marine Corps Base under the Fleet Assistance Program (FAP).

(8) The Flight Deck is similar to the runway at an Air Station with many of the same rules applying.

(9) Maintenance support for landing force spaces is similar to that provided by Base Maintenance; only quicker. Also, just like a Marine Corps Base, maintenance may be accomplished via self-help programs.

(10) Troop living spaces are generally not as spacious as the crew's. However, crew spaces are permanent quarters, and troop spaces are temporary quarters because of the mobile base concept.

b. The ship's Commanding Officer and the Commanding Officer of Troops (COT) may use the following integration tools.

(1) Use of the ship's Closed Circuit Television (CCTV) system for joint ship's CO and COT information briefs.

(2) Integration of landing force personnel into the ship's divisional work force. An example might be to have a Marine who is a skilled welder work with the ship's Hull Technicians (HTs).

(3) Forming joint Navy/Marine Corps Habitability Teams to complete habitability improvement projects in landing force spaces.

(4) Conduct "steel beach picnics" with the landing force and ship's company officers operating the grills and serving the enlisted personnel.

(5) Conduct joint meetings, such as Planning Board for Training (PB4T) and Eight O'clock Reports, where both landing force and ship's requirements can be addressed and scheduled.

CHAPTER II

EMBARKATION CONSIDERATIONS

1. **General**. This chapter is intended to capture some of the embark considerations associated with amphibious embark planning and execution. It is not an all encompassing source document but rather a collection of published source data. This data forms the baseline from which ship/PHIBRON Combat Cargo personnel can begin to develop a foundation for tactical and operational embarkation proficiency.

2. **Embarkation Milestones.** It is essential that the Landing Force Embarkation Officer and Amphibious Task Force Combat Cargo Officer develop coordinated embarkation milestones to be included in the deployment Plan Of Action and Milestones (POA&M). Embarkation milestones provide the baseline for all embarkation evolutions and should be realistic and accomplishable. Any changes to the published milestones must be coordinated through both the CATF and CLF.

3. **Embark/Load Planning Conferences**. The Embark or Load Planning Conferences are announced and jointly run by the ATF Combat Cargo Officer and the Landing Force Embarkation Officer. For the typical ARG this is the PHIBRON CCO and the MEU Embark Officer. When the ship is an independent deployer (e.g., UNITAS/WATC or Special Purpose MAGTF), the ship's CCO and the Team Embark Officer perform these duties. Normally planners should conduct an Initial, Mid and Final Embark Conference. Each of these conferences builds on the last.

a. Recommended topics or issues which should be addressed at the embark or load planning conferences include:

(1) Embarkation and ammunition reporting requirements.

(2) Load plan preparation and submission requirements.

(3) ISO container loading policy, constraints, and criteria.

(4) Naval Support Element (NSE) lift footprint and assignment to shipping.

(5) LFORM/MLA loading status and forecasted top-off dates (Classes I, III, IV, and V A/W).

(6) Marine Training Allowance (MTA)/ MEU Training Package spread loading.

(7) Port of Embarkation (POE) joint inspections.

(8) MOGAS storage capacities, retrograde capabilities, and safety considerations.

(9) The requirement for personnel working on the Flight Deck to be Aircraft Firefighting School trained and qualified.

(10) Aviation Ground Support Equipment (AGSE) embarkation requirements.

(11) Landing Force Accommodations Inspection timeline, reporting requirements, and methodology.

(12) M1A1 Tank and M88 Tank Retriever planning.

(13) U.S. Customs and Department of Agriculture requirements.

(14) Landing craft mix and Landing Craft Availability Table (LCAT) development.

(15) Shipboard policies relative to planning, coordinating and scheduling training.

(16) Contents and importance of the Embarked Troop Regulations.

(17) Schedule of Event (SOE) development, submission, and modifications.

(18) Loading of landing force personnel, supplies, and equipment while in-port.

(19) Compilation and distribution of command Points of Contact (POC) listings.

(20) Munitions cross-decking and retrograde policy development.

(21) Hazardous material (e.g., lithium battery, MOGAS, sulfuric acid, calcium hypochlorite, etc.) embarkation requirements.

b. An important issue that must be addressed at the onset of discussions is that there is one CCO per ship, one Team Embarkation Officer (TEO) per ship, and that all landing force embarkation/ debarkation matters should be directed to the CCO via the TEO.

c. The CCO should provide the TEO with a copy of the ship's current SLCP (including CAEMS diagrams). The CCO should have his personal copy with key points of interest highlighted on-hand and spend some time covering those areas with the TEO, allowing him to take notes for later reference. It is a good idea to walk the ship, allowing the TEO to make notes on printed deck diagrams of low overheads, monorail stowage areas, no stow areas, sounding tubes that require access, etc. Be sure to emphasize restrictions that must be considered when developing the load plan. A detailed review of the diagrams with embarked elements followed by a ship’s tour will facilitate planning and aid in resolving questions on ship’s capabilities.

d. Provide the TEO with a copy of the ship's schedule.

e. Provide copies of Embarked Troop Regulations, digitized and/or hardcopy.

f. Prior to the planning conference review:

(1) SLCP and Troop Regulations.

(2) Previous load plans.

(3) Ship's policies and regulations.

g. During the initial embark conference the TEO should be able to provide an initial listing of anticipated personnel, supplies and equipment. This document as well as the other information provides a mechanism for informing the command of the status of embark planning and allows them to provide their inputs and guidance.

h. The shipboard inspection of landing force spaces should occur concurrent with the scheduled Final Embarkation Planning Conference (FEPC). Also during this conference the final load plan is presented for review and signature by the ship’s Commanding Officer. Prior to submitting the load plan to the ship’s Commanding Officer, the Team Embarkation Commander/Commanding Officer of Troops should have already signed the load plan. The TEO is responsible for the development of the detailed load plan. The CCO’s function is to review the load plan and to ensure all of the appropriate Department Heads have had an opportunity to review and concur with its contents prior to the ships Commanding Officers review and signature. It is important to note that changes to the signed/approved load plan require the concurrence of both the ship’s Commanding Officer and Embarkation Team Commander.

i. When the ship is an independent deployer, the ship's CCO is responsible for providing copies of signed/approved detailed load plans, with associated load plan documentation, are distributed to the Navy chain of command. When ships are OPCON to an ATF, the ATF CCO is responsible for sourcing copies of each ship's signed/approved detailed load plan and distributing copies to the Navy chain of command.

4. **Advance Party**. The embarking units should plan for advance parties to embark the ship 48-96 hours prior to loading. This provides sufficient time to receive training and to familiarize them with the ship prior to embarking the main body. The composition of the advance party should consist of:

a. Billeting Officer. The billeting officer should receipt for troop linen, inspect and sign for all required troop spaces. Once the landing force space turnover process is complete he assumes responsibility for maintaining these spaces. Generally, they will have a representative from each unit or the senior man in each compartment sub-sign for their respective spaces.

b. Food Service. Food Service Attendants (messmen) and cooks should be embarked and integrated into their designated work areas. Messmen should be assigned for a minimum period of 30 days or the duration of the deployment (whichever is shorter). Ensure mess physicals are completed prior to embarking and presented to the ship's Food Service Officer upon arrival of the advance party. It is highly recommended that all mess personnel be berthed in the same compartment when possible.

c. Berthing Guides. Each embarking unit should provide a berthing guide. These guides are the key to all personnel settling in smoothly during the first days of embarkation. A few tips relative to the use of Berthing Guides include:

(1) Berth them in their unit's area.

(2) Take them on at least three ship tours prior to embarkation of the main body.

(3) Issue them some form of apparel to readily distinguish them as a berthing guide (i.e., tape on cover, vest, etc.).

(4) Provide them with a diagram (ship SLCP) of the ship with unit berthing assignments indicated.

(5) Billeting guides could accomplish bunk assignments as required by their unit.

(6) Billeting guides should be assigned for 48 hours after the main body is embarked; if possible.

(7) Assist in the issue/turnover/turn-in of linen.

d. Guard Force. The landing force may be required to embark a portion or all of the Guard Force should they elect to load supplies/equipment prior to the ship's scheduled arrival at the POE. This requirement should be addressed at the load planning conferences and documented in conference wrap-up messages.

e. Ship's Platoon. The Ship's Platoon functions as a separate entity under the operational control of the Combat Cargo Officer (CCO), as assisted by the Team Embarkation Officer. Once organized, it should remain intact during the entire period the embarkation team is deployed due to safety equipment (safety boots), training, and certification requirements.

(1) The Ship's Platoon should be embarked at least 48-96 hours prior to loading or receipt of any cargo. In some cases, portions of the Ship's Platoon will embark prior to the advance party, as in the case when cargo and equipment are being loaded pierside prior to the arrival of the remainder of the advance party. Figure II-1 delineates a recommended Ship's Platoon organization.

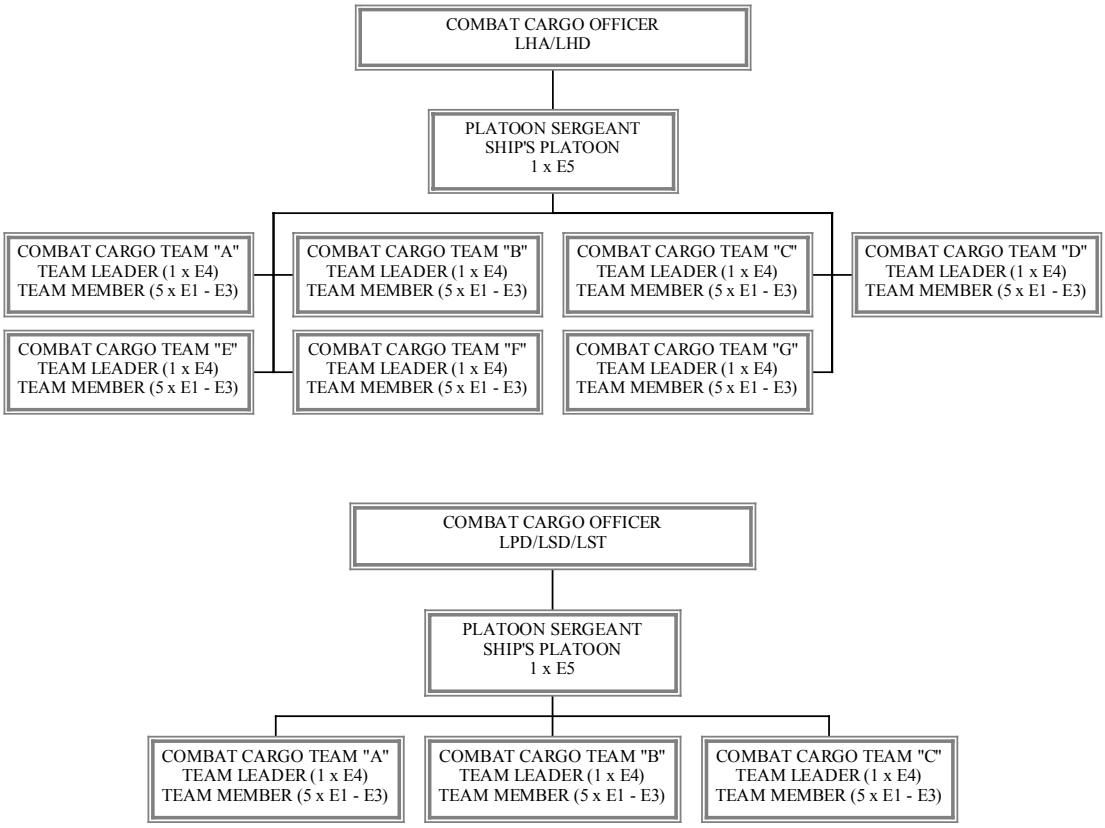

Figure II-1, Ship's Platoon Organization

(2) The Ships Platoon is not a replacement for the ship's 1 Alpha personnel. They are an augmentation force whose mission is to assist ship's company personnel during landing force cargo and equipment stowage, embarkation/debarkation and administrative movement operations. Upon arrival, the Ship's Platoon will receive detailed training and instruction in regard to their respective duties. Normally the ship is responsible for providing nearly all of the safety/protective equipment while the landing force is responsible for providing steel-toed safety boots. The following breakdown provides examples of the duties normally performed by the Ship's Platoon.

(a) Flight Deck. Ship's Platoon personnel will be assigned to the Flight Deck in accordance with the ship's Troop Regulations. Examples of the duties normally performed by Flight Deck Ship's Platoon personnel include:

- Verifying passenger manifests for helicopter transport.
- Passenger guides for heli-teams to/from helicopters.
- Assist passengers with baggage/cargo.
- Recover cranials/life preservers from helicopters and deliver to passengers.
- Brief passengers on boarding sequence and aircraft safety procedures.
- Ensure all cargo and equipment arriving/departing is accounted for.
- Ensuring that the owning unit has properly prepared the cargo for movement.
- Integrate with ship's crew and fight fires on the flight deck.
- Operation of shipboard forklifts (Only if required. Requires the approval of the ship's Commanding Officer. Operators must be properly licensed prior to operating shipboard forklifts.).

(b) Well Deck. Ship's Platoon personnel will be assigned to the Well Deck in accordance with the ship's Troop Regulations. Examples of the duties normally performed by Well Deck Ship's Platoon personnel include:

- Verifying passenger manifests for landing craft transport.
- Supervising onload operations to ensure vehicles and cargo are placed aboard ship in accordance with the approved load plan.
- Ensuring that all vehicles and cargo are properly lashed and secured for sea.
- Validating vehicles and cargo loaded to ensure compliance with the approved load plan.
- Inspecting vehicles to ensure mobile loads, tarps, etc. are properly secured prior to Landing Craft Air-Cushioned (LCAC) transport.
- Ensure all cargo and equipment arriving/departing is accounted for and ensuring that the responsible unit has properly prepared the cargo for movement.
- Observe activities in the vehicle/cargo stowage areas ensuring that vehicles and cargo are properly secured during and after daily operations.
- Contacting the unit representatives to correct discrepancies with their equipment.
- Operation of shipboard forklifts (Only if required. Requires the approval of the ship's Commanding Officer. Operators must be properly licensed prior to operating shipboard forklifts.

5. **Shipboard Coordination**. A joint meeting between the ship and embarking landing force elements should be conducted, prior to cargo loading/offloading evolutions, to discuss areas of concern and to address areas of support. Recommended discussion topics include:

a. Personnel augmentation requirements.

b. Communications.

c. Material Handling Equipment (MHE) readiness, availability, and current locations.

d. Safety.

e. Cargo Handling Systems.

f. Securing of Cargo/vehicles.

g. Traffic routes.

h. Loading/offloading points.

i. Types and amount of cargo/vehicles with an emphasis on those requiring special handling/stowage considerations.

j. Operational checks of cargo handling equipment/systems 24 hours prior to load/offload.

6. **Cargo Loading Prior to Unit Embarkation**. Embarking units may desire to load palletized cargo and maintenance vans prior to the scheduled embarkation date. If so, some key points to coordinate are:

a. An advance echelon to assist in stowage of material.

b. Delivery date and time.

c. Delivery location.

d. Coordination with Base Security for clearance and routing of vehicles on base.

e. Crane and MHE support. The Fleet Industrial Supply Center (FISC), Norfolk, Va., PWC San Diego, Ca., and CFAO Port Ops White Beach, Okinawa should be included in all discussions and message traffic relative to onload support and requirements.

7. **Final Staging for Embarkation**. A pre-embarkation inspection in the staging area at the Port Of Embarkation (POE) is the final chance to prevent problems from occurring during embarkation. Combat cargo and landing force embark personnel should inspect the equipment for proper preparation, condition, and for hazardous material identification/verification at least 24 hours prior to loading. Figure II-2 provides a sample vehicle inspection checklist.

a. Vehicle fuel tanks should not exceed three-fourths full. Trailer mounted (towed-load) items should not exceed one half tank full of fuel, however, there maybe items that must be empty due to stowage location (stowed on ramp) or understowed (tongue on deck) in which fuel can leak or slosh out. Each vehicle must have its own installed lifting devices. **FIVE GALLON FUEL CANS WILL BE EITHER FILLED WITH MOGAS OR EMPTY. IF THEY ARE FILLED WITH MOGAS A SEAL MUST BE AFFIXED. IF THE FIVE GALLON FUEL CANS ARE EMPTY THEY SHOULD BE CERTIFIED GAS FREE.**

b. Pallets must have four-way access, be clean, serviceable (pallet wings) for sling hoisting and must be properly banded.

c. CONEX Boxes/QUADCONS should be serviceable and with no hazardous material inside. The weight must be accurate. Remember, if you have to move it aboard ship, normally ship's forklifts only have a 6,000 lb. maximum capacity.

d. Require all cargo to be free of fuel unless designated as POL. As an example, field ranges are known to have some residual fuel in their tanks.

e. Hazardous Material. The four hazardous materials embarked by the landing force which cause the greatest concern are:

(l) Lithium Batteries.

(2) Sulfuric Acid.

(3) Fuel (Kerosene, white gas, MOGAS).

(4) Calcium Hypochlorite.

f. Vehicles must be staged to support the embarkation plan.

g. Proper identification of all hazardous materials is imperative. Transportation of hazardous material is usually not a problem except when the embarking units **do not** advise the ship of what hazards they are embarking.

SHIP: _____ EXERCISE: _____ DATE: _____

	Nomenclature							
	Serial #							
Placard. Contains Landing Serial, Priority Number, Driver Name, and Owning Unit.								
Fluid Leaks. No Leaks.								
Tire Pressure. Within Prescribed Limits.								
Vehicle Start-Up. Starts Without External Support or Aid.								
Brakes. Operational.								
Emergency Brake. Operational.								
Fuel Level. ¾ Prime Mover, ½ Trailer mounted equipment. Some Items with Fuel Tank Cap in Front Must be Empty. Fuel trucks/sixcons empty.								
Height. Does not exceed the maximum height of its intended stowage location.								
Lashing Points. Ensure all shackles/cotter pins are in place and serviceable.								
Cargo/Mobile Loads. Lashed with minimum ½ " rope or cargo straps.								
Pintle Hook. Operational with Cotter Pin and Chain Attached.								
Vehicle Doors are Secured. Removable doors must not come off during LCAC Ops.								
Tarp/Canvas Lashing. Secured at all Prescribed Points.								
Vehicle Cleanliness. Free of dirt, mud, insects and Trash/Garbage.								
Fuel Cans. Stored in Approved Racks Permanently Installed on Vehicle.								
Towed Loads. Within the Prescribed Weight Rating for the Prime Mover.								
Shoring. On-Hand for all Tracked Vehicles, Trailer Tongues, and other Special Equipment.								
Hazardous Cargo. Secured, Authorized, and Identified on Signed Load Plan.								
Fire Extinguishers. Stored in Approved Vehicle Mounted Racks.								
Vehicle Lights and Horn. Operational.								
Water Trailers. Empty.								
Windshield/Side Mirrors. Serviceable.								
Vehicle weight. Vehicle does not exceed Rated cross-country weight.								

Figure II-2, Sample Vehicle Inspection Checklist

8. **Embarkation Day**. The following points are provided as reminders of what to expect:

a. CCO/CCA's are advisors. Deck Department, assisted by the Ship's Platoon, is responsible for:

(1) Moving, placing and securing of cargo in accordance with the load plan. The CCO and TEO must approve deviations to the plan. Once the onload is complete, the TEO is responsible for providing updated load plans to the CCO.

(2) All vehicles will be guided and stowed in accordance with the approved load plan using vehicle guides; no vehicles move without the guides.

(3) Assistant drivers (A-drivers) will be in the vehicle during loading or unloading operations.

b. The TEO/TEA and CCO/CCA should be in the area of cargo/vehicle loading to resolve any issues that may arise.

c. Problems will occur and adjustments to the load plan may have to be made. Knowledge of embarkation, proper preparation of the embarking unit's supplies and equipment, and the ship will serve to remedy the problem.

d. Load only those items that have been inspected and are included in the signed and approved load plan.

e. The CCO is responsible for keeping the ship's CO/XO informed of the onload/offload status.

f. Submit ATF mandated reports in a timely manner. This normally includes the Personnel, Cargo, Vehicle, and Estimated Time of Completion (PCVT) report.

9. **Vehicle/Cargo Lashing Material**. Vehicles and cargo are lashed to protect the ship, cargo, and personnel. This requires that the ship's lashing equipment be in proper working condition. Ensuring this material is in good repair is a responsibility of the ship's Deck Department. Ensuring the correct number of lashings is onboard and in serviceable condition is required prior to deployment. This information is critical when evaluating load plan supportability.

10. **Stowing Vehicles on Inclined Decks or Ramps.**

a. <u>For LPD/LSD Class ships</u>:

(1) No vehicles (wheeled or tracked) shall be stowed on any fixed ramps.

(2) No vehicles shall be stowed on any removable and/or portable ramp.

(3) Within structural design limitations, vehicles will only be stowed on hinged (between decks) ramps when they are in the raised/up position and locked.

(4) No vehicles shall be permanently stowed on the false beach.

b. <u>For LHA/LHD Class ships</u>:

(1) No tracked vehicles shall be stowed on any fixed inclined deck or ramp.

(2) No wheeled vehicles may be stowed between frames 83 and 93 on the inclined portion of the third deck (LHA only).

(3) Within structural design limitations, vehicles will only be stowed on hinged ramps when they are in the raised/up position and locked. The temporary storage or parking of vehicles on hinged ramps

is authorized provided the ship's SLCP specifically authorizes such action. This temporary storage/parking is normally accomplished to support selective offload or load reconfiguration requirements.

(4) No vehicles shall be permanently stowed on the false beach. Specific weight limitations associated with the temporary parking of vehicles/equipment on the false beach must be addressed in the SLCP.

11. **Auxiliary Five-Gallon MOGAS Can Storage**. Auxiliary cans must be stowed in permanently attached auxiliary five-gallon MOGAS can storage racks. Storage in protected compartments or areas now authorized for stowing vehicles is also authorized. However, the following precautions must be taken:

a. Auxiliary five-gallon MOGAS cans must be certified and comply with MIL-C-1283E.

b. Inspect cans after filling with MOGAS to assure no leaks. Apply seals to cans to aid in detecting loosened caps or tampering.

c. After operations ashore, used fuel cans shall be refilled, when possible, inspected and sealed before embarking. Empty fuel cans must be certified gas free; partially filled cans will not be embarked.

d. MOGAS shall not be transferred to or from five-gallon auxiliary cans while aboard ship unless specifically authorized in the SLCP and only after coordination with the appropriate ship's Department Heads.

12. **International Standards Organization (ISO) Containers**. The International Safe Container Act, outlined in Public Law 95-208, requires that new and existing ISO configured equipment and containers meet the Convention for Safe Containers (CSC) certification requirements. This means that all ISO configured equipment and containers, MILVANS, QUADCONs, MMF Vans, and Shelters must meet the mandated CSC Certification requirements or they will not be loaded.

a. Compliance with this requirement is evidenced when viewing CSC Safety Approval Plate, which should be found on each of these items. The placement of a valid and current DD Form 2282, CSC Inspection Decal, on the approval plate confirms its structural serviceability. Specific inspection and certification criteria are contained in MIL-HNDBK-138A.

b. In addition to the above container safety and certification requirements, the following prohibitions/restrictions were also articulated in the joint policy message.

(1) Commercial ISO containers, which are not part of an embarking units organic assets, will not be loaded. This prohibition includes all containers; especially those 20-foot in length or greater.

(2) Embarking units, which have organic specialized maintenance containers, field logistics systems modules (e.g., SIXCONS) or MILVANs, may load these assets aboard amphibious shipping. However, the preferred method for embarking these assets is in the mobile loaded configuration.

(3) Certified/approved containers may be deck loaded provided they do not exceed 10,000 pounds and the landing force embarks organic material handling equipment (MHE) capable of loading and offloading these assets.

(4) Quadruple containers (QUADCONs) are the only container assets approved for double stacking aboard amphibious shipping. When double stacked, the QUADCONs must be secured/lashed in accordance with the following Naval Sea Systems Command prescribed procedures (PEO CLA Washington DC//PMS377// 011150Z Apr 97 refers). Embarking units must observe minimum clearance restrictions and maintain the prescribed distances between the top of the QUADCONs and the installed fire fighting systems as defined in the SLCP.

(a) Individual QUADCONs shall be secured to the deck with four 35K lashings.

(b) Double stacked QUADCONs should also use four 35K lashings if they are a single tier.

(c) A pair of double-stacked QUADCONs shall be secured to the deck using four 70K lashings. All lashings shall be crossed at 45 degrees to the deck.

(d) Side-by-side stacks of double-stacked QUADCONs shall be joined together with Peck and Hale container conlinks (Model No. CTC1012) or the standard ISO horizontal/vertical connectors (often referred to as pineapples). These connectors are normally fielded as a component of the QUADCON. The 70K and 35K lashings should be connected to the QUADCONs using a Peck and Hale plug hooks (Model No. H159) or an equivalent hook. Another alternative is to run the chain through the ISO corner fitting.

13. **Tank and Tank Retriever Planning**. In 1990, Naval Sea Systems Command (NAVSEA) conducted a structural analysis of LHA, LHD, LPD, LSD (36/41/41(CV)), and LST class ships to determine their capability to embark and transport the M1A1 Tank and M88 Tank Retriever. Figure II-3 summarizes the Marine Corps Systems Command (MARCORSYSCOM) weight data for the embarked and combat ship-to-shore planning weights for the M1A1 Tank.

a. The NAVSEA structural analysis was conducted using the weights reflected in Figure II-3 and appropriate ship motion factors. It was assumed that parking of the M1A1 tank will occur during storm sea conditions and that traversing will occur in Sea State 3. The results of this analysis indicate that parking and traversing operations can be accomplished as indicated in Figure II-4.

14. **Project Handclasp Materials**. Project Handclasp is a people-to-people program administered by a San Diego based project office. Material used by this program is obtained from a variety of private sector sources – industrial, civic, religious and individuals. It is then carried overseas aboard Navy ships on a space available basis. Material donated to Handclasp has included paint and painting supplies; educational materials such as books and school supplies; medical equipment, supplies and non-narcotic medicines; food; clothing; and sewing machines.

a. These materials have stowage requirements that are not normally included during load plan development. All Handclasp materials must be stowed in covered/secured areas. They cannot be stowed on the weatherdecks, tied down to the main deck, or stowed in any open area. These restrictions may limit the amount of material requested. If the ship initiates the request for Handclasp materials, the CCO can coordinate with the ship's Supply Officer, Chaplain, and Executive Officer with regards to space/storage limitations. If the material is requested by an external organization/agency, the ship will have to inform both the Director, Project Handclasp and the requesting activity of the space limitations. This will allow the package to be tailored and preclude unnecessary shipping expenses.

b. Prior to receiving the Handclasp materials the Director's office will forward a letter. This letter will provide detailed information as to the quantity and types of material being shipped as well as the shipping configuration. This data provides you with the necessary physical characteristics (length, width, height, and weight) of each pallet to effect load planning. The letter will also include a copy of the appropriate Transportation Control and Movement Document (TCMD) for each shipment. The TCMD also provides you with the details on transportation modes and container/seal numbers for the materials. Normally this material is shipped to the Fleet Industrial Supply Center (FISC) at the respective Naval Base for further transfer to the ship.

c. The phone number for the Director, Project Handclasp is (619) 532-1492 with the DSN prefix of 522. Should your command need to initiate a request for materials or otherwise communicate with the Director's office the appropriate plain language address (PLAD) to use on naval message traffic is DIRECTOR PROJECT HANDCLASP SAN DIEGO CA with an information copy to CNO WASHINGTON DC//N523/N09B//.

15. **Non-Combatant Evacuation Operation (NEO) Package**. On occasion ships may embark a NEO package. Normally the ship's Supply Officer controls the ordering, receipt and storage of this package as well as its distribution. The ship's CCO should contact the Supply Officer early in the planning stages to determine if such a package will be embarked and gauge the potential impact on the load plan. At a minimum, the CCO should provide the TEO with a detailed list that defines the NEO package composition and storage location; thus aiding in landing force operational planning.

	Embarked Weight In Pounds	Ship-to-Shore Weight In Pounds
Factory Configuration	124,950	124,950
75 Percent Fuel Load	2,666	2,666
B11 and Collateral Equipment	1,243	1,243
Deep Water Fording Kit	315	315
Crew	0	837
Main and Subcaliber Ammo	0	3,003
Organizational Equipment	0	1,219
Total	129,174	134,223
Short Tons	64.59	67.12

Figure II-3, Planning Weights For The M1A1 Tank

Class Ship	Location	Embarked Weight Parked/Traversing	Ship-to-Shore Weight Park/Traversing
LHA 1	Well Deck	Y/Y	Y/Y
	3rd Deck FR 42-65	Y/Y	N/Y
	3rd Deck FR 65-89	Y/Y	Y/Y
LHD 1	Well Deck	Y/Y	Y/Y
	3rd Deck	Y/Y	Y/Y
LPD 4-6	Well Deck	Y/Y	N/Y
	3rd Deck	N/R1	N/N
LPD 7-15	Well Deck	Y/Y	Y/Y
	3rd Deck	N/R1	N/N
LSD 36	Well Deck FR 52-105	Y/Y	Y/Y
	Well Deck FR 105-184	N/R1	N/N
	Well Deck FR 184-270	Y/Y	Y/Y
LSD 41-43	Well Deck FR 35-42	Y/Y	Y/Y
	Well Deck FR 42-67	R2/Y	R2/Y
	Well Deck FR 67-74	Y/Y	Y/Y
	Well Deck FR 74-98	R2/Y	R2/Y
	Well Deck FR 98-145	Y/Y	Y/Y
LSD 44-48	Well Deck	Y/Y	Y/Y
LSD 41 (CV)	Well Deck	Y/Y	Y/Y
	Ramp to 2nd Deck	N/Y	N/Y
	2nd Deck	Y/Y	Y/Y
LPD 17*	Well Deck	Y/Y	Y/Y
	Ramp to 2nd Deck	N/Y	N/Y
	2nd Deck	Y1/Y	Y1/Y

Figure II-4, Shipboard M1A1 Tank Stowage Limitations

b. The following footnotes apply to Figure II-4.

(1) The asterisk (*) indicates the current proposal.

(2) "Y" means the deck is certified structurally without restrictions.

(3) “N” means the deck is not certified structurally.

(4) “R1” indicates that the tank may traverse over the area when the ship is pierside or close to shore under calm sea conditions only.

(5) “R2” indicates that tanks may be positioned two abreast symmetrically about the ships centerline. Tanks must be centered on Frames 50, 60, 80, and 90.

(6) “Y1” indicates that the M1A1 Tank is certified for parking on the hinged ramp going from the 2nd Deck (Main Vehicle Deck) to Lower Vehicle provided the ramp is in the up and locked position.

c. Consult the SEAOPS Manual Volume III in order to determine M1A1 Tank loading procedures for LCAC. This same instruction will also outline the lashing procedures and restrictions imposed when parking an LCAC on its fly-over blocks. An important note is that all ship classes are structurally capable of transporting pre-loaded M1A1 Tanks on LCACs parked in the Well Deck up to a Sea State of 8.

d. Currently the LCU is restricted from carrying more than two M1A1 tanks.

e. The constraints and load limitations outlined in the preceding paragraphs also apply to the M88 Tank Retriever.

CHAPTER III

LFORM/AMMUNITION ADMINISTRATION AND PROCEDURES

1. **General**. This chapter provides an overview of the Landing Force Operational Reserve Material (LFORM) program. The CCO's role as LFORM manager mandates that they have a working knowledge of ammunition categories, allowances, ordering information and timelines, stowage compatibility and load planning, inventory requirements, loading preparations and policies, and required reports. Given the importance of these sustainment stocks, aggressive and active involvement is critical to providing timely support to the landing force and mission success.

2. **Class I, III, and IV LFORM**. Class I (Subsistence), Class III (Bulk and Packaged Petroleum, Oils, and Lubricants (POL)), and Class IV (Field Fortification Materials) are prepositioned on amphibious ships to provide sustainment support to elements of a Marine Expeditionary Unit (MEU). The notional planning figure used to derive the actual quantities to be embarked is based on providing 15 days of sustainment, within an Amphibious Ready Group (ARG), for approximately 2,400 personnel.

a. The CCO does not sign for LFORM. Normally, the ship's Supply Officer receipts for all Class I, III (Packaged), and Class IV LFORM stocks. Class III Bulk (MOGAS) is normally accepted and signed for by the ship's Air Department Fuels Officer or Chief Engineer depending on the class of ship. The CCO, as LFORM manager, is responsible for:

(1) Coordinating the onload/offload of these stocks with the ship's Commanding Officer and other Department Heads as required.

(2) Generating all LFORM onload/offload requests to MARFORLANT/PAC.

(3) Conducting joint inventories with the designated MARFORLANT/MARFORPAC representatives at the time of receipt/turn-in.

(4) Documenting/load planning LFORM stocks using the current logistics automated information systems.

(5) Coordinating the institution of pest control procedures/inspections for Class I (MREs) with the ship's Medical Officer.

b. Detailed guidance relative to Class I, III, and IV LFORM administration, requisitioning, loading, and reporting can be found in COMNAVSURFLANTINST 4080.1/COMNAVSURFPACINST 4080.1.

c. The following paragraphs provide more detailed information on each LFORM class of supply.

(1) Class I consist of Packaged Operational Rations (POR) containing Meals, Ready to Eat (MRE) and Fuel Bar, Compressed Trioxane (FBT). Although the FBT is a Class III item, it is associated and embarked with the MREs. Class I is prepositioned aboard amphibious ships to provide the contingency ration support for deployed forces. This requirement is calculated on providing each member of a MAGTF three meals a day for 15 days. LFORM rations will not normally be used to satisfy routine training requirements unless authorized by COMMARFORLANT/COMMARFORPAC.

(2) Class III Bulk and Packaged Petroleum's, Oils, And Lubricants (POL) consist of bulk MOGAS and packaged POL products. The total POL requirements are based upon providing 15 DOS to support a MEU. The specific quantities to be loaded by class of ship are delineated in COMNAVSURFLANTINST 4080.1/COMNAVSURFPACINST 4080.1. LFORM POL is designated as such due to funding sources and the ships inability to rotate or have separate tanks for Navy and Marine Corps fuel. Some pertinent data points when dealing with Class III LFORM stocks.

(a) The Navy has the responsibility to provide PWR bulk fuel except MOGAS; MCO P4400.39 applies.

(b) LFORM POL is requisitioned by COMMARFORLANT/COMMARFORPAC and prepositioned aboard amphibious vessels for contingency purposes. The total requirement is based upon providing 15 DOS to support a MEU; to include the Naval Support Element (NSE).

(c) For this category of POL, the bulk portion consists of MOGAS only. Due to its relatively short shelf-life, and to prevent contamination to the fuel, MOGAS is not normally loaded earlier than 30 days prior to each deployment or before the Advanced Training Phase.

(d) Landing force elements are normally required to support MOGAS requirements for short duration work-up periods prior to the onload of LFORM MOGAS. The landing force should coordinate the loading and stowage of MOGAS bladders or drums with the ships CCO. Landing force/embarked units are responsible for embarking sufficient quantities of flex-cells or fuel bladders to transport the fuel from ship to shore.

(e) The consumption of bulk MOGAS is authorized in support of training or exercise evolutions and contingency operations. When bulk MOGAS is consumed for training or exercises, the unit requesting the fuel must provide the ship with appropriate documentation (DD-1149) for reimbursement of cost. The ship is required to report loading/off-loading/consumption of the fuel in accordance with current editions of COMNAVSURFLANTINST 4080.1/COMNAVSURFPACINST 4080.1.

(f) The consumption of any packaged POL product is restricted to contingency operations. Exercise or training requirements must be provided from embarked landing force supplies.

(3) Class IV (Construction/Field Fortification) consists of construction/field fortification materiel which is limited to barbed wire, concertina wire, fence posts, and sandbags. These assets have been derived from the equipment allowance file (EAF) and tailored to the projected MEU requirements for 15 days.

d. Additional considerations to be addressed with respect to Class I, III, and IV LFORM.

(1) Although LFORM is not planned for storage aboard LSD-41 and LSD-49 (Cargo Variant) class ships, these vessels may be required to carry specific quantities as determined by COMMARFORLANT/COMMARFORPAC.

(2) Early coordination between combat cargo and MARFORLANT/PAC representatives will ensure a successful onload by providing insight on such matters as payment for crane, MHE/CHE, and stevedore support and the actual weight/configuration of the LFORM Class I, III, and IV pallets.

3. **Ammunition Accounts**. SPCCINST 8010.12, Conventional Ammunition Integrated Management System (CAIMS), describes the ammunition accounts maintained onboard amphibious ships. Detailed descriptions of the ammunition accounts are outlined in the following subparagraphs.

a. Landing Force Operational Reserve Material (LFORM), Class V(W). Class V(W) LFORM, designated the “November” account, is Marine Corps-owned ground ammunition designated to support the Landing Force during an actual contingency, or unscheduled training for a possible contingency. LFORM allowances are controlled by the COMMARFORLANT and COMMARFORPAC, and requisitioned by the Marine Expeditionary Force (MEF). The current allowance is for 10 days of supply (DOS) onboard the LHA’s and LHD’s, and 5 DOS onboard the LPD’s. LST’s and LSD’s are not routine LFORM carriers, but may carry a small amount in support of independent deployments such as a Special Purpose MAGTF (SPMAGTF) or UNITAS. Tailoring of the LFORM account may be coordinated with COMMARFORLANT/ COMMARFORPAC, via the PHIBGRU as required. With the exception of requisitioning LFORM, the ship is responsible for all aspects of LFORM and it’s accountability. It is important to remember that LFORM is a COMMARFORLANT/COMMARFORPAC asset and the respective command should be consulted prior to its use.

b. Mission Load Allowance (MLA). MLA, designated the “Hotel” account, is Class V(A) aviation ammunition designed to support the embarked Marine Aviation Combat Element (ACE). Allowances are controlled by Commander in Chief, Atlantic/Pacific Fleet (CLF/CPF). The ship requisitions MLA, normally via an Ammunition Transaction Report (ATR) to Naval Ammunition Logistics Center (NALC), Mechanicsburg, Pa. Tailoring of the aviation MLA must be coordinated with the appropriate Fleet Commander via the ship’s

chain of command. The ship's ammunition administrator is responsible for all aspects of MLA account management.

c. Explosive Ordnance Disposal (EOD). The EOD, or "Lima" account, is Navy ammunition designed to support the requirements of an embarked Navy EOD team. The EOD account allowance is controlled by COMNAVSURFLANT/PAC (CNSL/CNSP), with any change requests or recommendations requiring CNSL/CNSP and PHIBGRU approval. The ship requisitions EOD ammunition via an ATR to NALC. The ship's ammunition administrator is responsible for the requisition and all aspects of the EOD account.

d. Special Warfare (SPECWAR). The SPECWAR, or account "Quebec" account, is Special Warfare Command (SPECWARCOM) ammunition designed to support the requirements of embarked Navy SEAL and Special Boat Unit (SBU) units. The SPECWAR account allowance is controlled by SPECWARCOM, and any requests for tailoring or modification changes must be submitted to SPECWARCOM via CNSL/CNSP and the appropriate PHIBGRU. The ship requisitions SPECWAR munitions via an ATR to NALC. The ship's ammunition administrator is responsible for all aspects of the account.

e. Shipfill. The shipfill, or "Alpha" account, is Navy ammunition designed to support the ship's own permanently installed armament, embarked Naval Beach Group units, authorized small arms and pyrotechnics. The allowance is established by CNSL/CNSP, and any request for changes or tailoring must be submitted to them via the appropriate PHIBGRU. The ship requisitions its shipfill via an ATR to NALC. The ship's ammunition administrator is responsible for all aspects of account management.

f. Non-Combat Expenditure Allowance (NCEA). NCEA is ammunition allocated to the ship for its training, non-combat, and/or exercise expenditures. The allowance is established by CNSL/CNSP, and any request for changes or tailoring must be submitted to them via the appropriate PHIBGRU. The ship's ammunition administrator is responsible for all aspects of the account.

g. Marine Training Ammunition (MTA)/MEU Training Package. MTA, or "Xray account, is Marine Corps-owned Class V(W) ammunition embarked to support the landing force's training exercises during a deployment. The MEU commander identifies the size and composition of the MTA package for each deployment, establishes major subordinate element (MSE) allowances, and generates a spread-load plan (how the munitions will be divided between the ships of the ARG). The MEU then submits their plan to the appropriate Marine Expeditionary Force (MEF) command element, which submits the ammunition requisitions on behalf of the MEU. Local procedures differ relative to MTA reporting and accountability. All amphibious ships perform the normal receipt, stowage, and Retail Ordnance Logistics Management System (ROLMS) induction, management and reporting procedures associated with MTA, while others rely on the embarked unit's ammunition representatives to accomplish MTA administrative reporting. Review the contents of COMNAVSURFLANTINST 4080.1/ COMNAVSURFPACINST 4080.1 for detailed guidance on local procedures. It is recommended that all issue and receipt transactions be accomplished and documented in writing and that a record of all transactions be maintained for 6 months after the deployment. MEU ammunition representatives will require routine, escorted access to the ship's magazines for inspection and inventory of the MTA stocks.

h. Standard Training Package (STP). STP is aviation ammunition embarked to support the training requirements of an embarked Marine aviation squadron. Previously, squadrons were authorized to expend up to ten percent of certain Navy Ammunition Logistics Codes (NALCs) for training purposes. This policy made it difficult for ship's ammunition administrators to accurately track authorized expenditures and contingency stock levels given that both were consumed from the same account. STP allowances, tailoring, and ordering procedures are the same as those listed for MLA.

4. **Allowances and Requisitioning Procedures**. Requisitioning ammunition requires forethought and an assessment of the ship's long-range schedule. Anticipated expenditures should be taken into account when ordering ammunition for onload or top-off. The goal for deploying ships is to be at 100% of allowance in all ammunition accounts. When the ship falls below 90% of its allowance(s), it must reorder mission fill ammunition. This does not apply to NCEA.

a. With the Fleet CINC's approval, CNSP/CNSL assigns allowances for Shipfill, MLA, EOD, and SPECWAR, while COMMARFORLANT/COMMARFORPAC assigns LFORM allowances. Final allowances and tailored allowances are disseminated, via a serialized letter or naval message, from the assigning authority to each ship class, with special revisions added for any ship specific circumstances (i.e. Squadron or MEU Flag ship, SPECWAR, EOD, SEAL detachments). Although the Fleet CINC authorizes changes to allowances, the actual tailoring of allowances must be coordinated through the assigning authority and the appropriate PHIBGRU.

b. Approximately 60 days prior to the scheduled onload, the ship shall send an ATR to AMMOLANT/PAC, for all shortfalls and anticipated shortfalls per SPCCINST 8010.12. When determining the required delivery date (RDD), the ship should request that ammunition arrive at the onload site approximately 5-7 days before the first day of the scheduled onload. This allows the issuing facility adequate time to inventory, stage, and document the munitions.

c. Follow-up ATR's, for unexpected requirements, may be submitted. Detailed requisitioning instructions and required lead times can be found in NAVSUP P-724.

5. **Hazardous Class and Security Risk Categories**.

a. Hazardous Class. Ammunition is classified in the method by which it detonates. NAVSEA OP 4, Ammunition Afloat, illustrates the Hazard classes of ammunition on page 3-21 through 3-23. This document delineates the types of hazards and addresses compatibility with other classes of ammunition.

b. During ammunition movements, the Net Explosive Weight (NEW) is based on the total NEW, using the highest hazard class being handled. For example, 100 pounds NEW of 1.4 ammunition being handling at the same time as 35 pounds NEW of 1.2 would be considered 135 pounds NEW of 1.2 explosives. The NEW restrictions are based on the total NEW allowed for 1.2 ordnance. Early identification of hazard classes, total NEW, and restrictions for the onload/offload location will resolve several problems that could occur during the ordnance handling evolution.

c. Security Risk Categories (SRC). Most Naval Weapons Stations (NWS) or other ordnance activities will base their munitions delivery schedules on SRC. This is due to the fact that some munitions products are far more sensitive and pilferable than other types of ammunition. Therefore, these activities want to limit accessibility and the amount of time these items are not in a secure storage environment. The CCO and ship's Weapons/Ordnance Officer should address the onload/offload sequence during joint planning sessions with the supporting NWS/ordnance activity. The following paragraphs address the four types of SRC.

(1) Category I (CAT I): Non-nuclear missiles and rockets in a ready-to-fire configuration, or if jointly stored or transported with the launcher tube and/or grip stock and the explosive round, for example: Hamlet, Redeye, Stinger, Dragon, Javelin, Light Antitank Weapon (LAW) (66mm), shoulder-launched multi-purpose assault weapon (SMAW) rocket (83mm), M136 (AT4) anti-armor launcher and cartridge (84mm).

(2) Category II (CAT II): Missiles and rockets not in a ready-to-fire configuration that are crew-served or require platform-mounted launchers and other equipment to function. Included are rounds of the tube-launched optically tracked weapon (TOW) and Hydra-70; hand or rifle grenades, high explosives and white phosphorus; mines, anti-tank or anti-personnel (unpacked weight of 50 pounds or less each); explosives used in demolition, C-4, military dynamite, and TNT with an unpacked weight of 100 pounds or less; and warheads for sensitive missiles and rockets weighing less than 50 pounds.

(3) Category III (CAT III): Missiles and rockets that require platform-mounted launchers and complex hardware and software equipment to function, such as the Hellfire missile; ammunition, .50 caliber and larger, with explosive filled projectile (unpacked weight of 100 pounds or less each); incendiary grenades and fuses to high explosive grenades; blasting caps; supplementary charges, bulk explosives, detonating cord, and warheads for sensitive missiles and rockets weighing more than 50 pounds but less than 100 pounds each.

(4) Category IV (CAT IV): Ammunition with a non-explosive projectile (unpacked weight of 100 pounds

or less each); fuses, except for those listed in CAT III above; grenades (illumination, smoke, and CS); incendiary destroyers, riot control agents, 100 pound package or less; explosive compounds of sensitive missiles and rockets (except warheads); and warheads for precision guided munitions (PGM) weighing more than 50 pounds (unpacked weight).

6. **Ammunition Compatibility and Load Plans**. NAVSEA OP 4 provides detailed guidance on amphibious ship ammunition compatibility. Additionally, chapter 3of NAVSEA OP 4 and Appendix F of this publication provide ammunition compatibility charts that segregate common NALCs into their compatibility groups. Based on the compatibility groups of each individual NALC, load plans can be generated that conform to NAVSEA OP 4.

7. **Inventories, Inspections, and Assist Visits**.

a. Inventories are required upon relief of the Commanding Officer; upon relief of the Department Head responsible for the items; and upon commissioning or deactivation. Security Risk Category II, III, and IV ammunition and explosives must be inventoried annually with all records retained by the command for at least 2 years. Sealed boxes need not be opened if there is no evidence of tampering. Any documentation pertaining to an inventory adjustment, to include MLSRs, will be retained for at least 4 years.

b. Assist Visits/Training Teams.

1. Ordnance Handling Safety and Assistance Team (OHSAT). OHSAT is an explosive handling safety assistance program for the purpose of monitoring explosive safety practices and material conditions incident to the handling, storage and use of conventional weapons and explosives. An OHSAT visit is normally conducted at least once during each deployment cycle and prior to onloading ammunition. OHSAT visits are scheduled when requested by the command and are conducted on a not-to-interfere basis. Upon completion of each assist visit, the OSHAT will provide an oral out-brief to the ship's Commanding Officer and a written report.

2. Mobile Ordnance Training Team (MOTT). The MOTT provides ship's ordnance personnel with handling, assembly and fleet sentencing training. The ship will have personnel trained in sentencing since this provides the necessary qualifications for inspecting ammunition for proper packaging, documentation, and segregation. These are necessary skills when conducting onloads, offloads, or backloads of ammunition products and when maintaining accurate inventories. Normally this training is offered/scheduled by COMNAVAIRLANT/PAC once a naval message request has been submitted by the ship; via COMNAVSURFLANT/PAC and the appropriate PHIBGRU.

8. **Reports**. The following paragraphs detail the standard ammunition reports.

a. Ammunition Shortfall Report. Upon completion of the initial LFORM onload, all ships are required to submit a monthly Ammunition Shortfall Report per COMNAVSURFLANTINST 4080.1/ COMNAVSURFPACINST 4080.1. Responsibility for submission of this report lies with the ship's Combat Cargo Officer and Ordnance/Weapons Officer.

b. Ammunition Transaction Report (ATR)**.** The automated process in which a message is generated by the ship's ROLMS computer and is transmitted via naval message to NALC in order to update the CAIMS database. Per NAVSUP P-724, an ATR must be submitted to report, among other things; receipts, issues, expenditures, and reclassifications affecting the ship's Navy ammunition accounts.

c. Transaction Item Report (TIR)**.** A computer file generated by the ship's ROLMS computer and transmitted via SALTS to the Marine Corps Systems Command in order to update the Marine Corps Ammunition Accounting and Reporting System (MAARS) database. Per NAVSUP P-485, TIRs are submitted by the ships to report, among other things; receipts, issues, expenditures, and reclassifications affecting the ship's LFORM account.

d. Report of Discrepancy (ROD). Per OPNAVINST 5530.13, a ROD should be sent any time a traceable

seal is broken and/or the quantity or condition code on the attached document does not match the actual quantity and/or condition code. This ROD should be specific as to the originator, seal number, stated quantity, actual quantity and receipt date/location. Additional information relative to ammunition transaction reporting and Report of Survey actions are contained in OPNAVINST 5530.13.

9. **Contingency Support Package Plans**. A Contingency Support Package is a self-contained package of ordnance designed to support a specific mission. The composition of a Contingency Support Package is identified in the Marine Expeditionary Unit (MEU) combat instructions. At the confirmation briefings, a contingency package will be chosen. Due to the short lead-time required to assemble contingency packages, it is necessary to sort various packages within the magazines to allow expeditious issue of ordnance. Once the MEU combat instructions are published, the ship's ordnance handling personnel should arrange the ordnance in the magazines to permit quick retrieval of the basic package, so that landing force personnel can efficiently package the material and effect issue within 12 hours. In most cases, the basic contingency packages will contain similar items with varying quantities. Due to the rapid response sometimes required, especially for the Marine Aircraft Squadron, standard airborne packages should be readily accessible in 2-3 hours.

10. **Onloads, Offloads, and Backloads**.

a. Onloads. Ship's should plan only two loads per inter-deployment cycle. The initial load should include all shipfill, NCEA, SPECWAR, EOD, MLA, LFORM, and MTA. The goal is to minimize further load requirements, and maximize range and depth with the initial onloads. The second onload, or "top-off", includes any items that were not physically available during the initial onload, replenishment of NCEA, and munitions that may have been affected by a NAR after the initial onload and prior to the top-off. The top-off may also include the offload of items affected by NARs.

b. Offloads. After the completion of a major deployment, and prior entering the yard period for industrial maintenance, ships are required to do a complete ammunition offload, except for a limited quantity of security munitions.

c. Backloads. During deployment, upon completion of a training exercise, it may be necessary to backload unexpended ammunition. If this occurs, it is paramount that all munitions are properly accounted for, completely cleaned, certified clean by a Preventative Medicine Technician (PMT), and repackaged in their original packaging materials, sealed with tracable leadwire seals, and tagged with appropriate condition code tags, prior to returning them to any ship's magazine. A lack of proper cleaning and certification prior to returning munitions to a magazine could result in agriculture certification problem upon return to CONUS.

11. **CCO Class V LFORM Responsibilities**. The CCO is an LFORM manager. However, this does not imply that he is responsible for the management and accountability of Class V LFORM. It also does not imply that he will sign/receipt for LFORM ammunition stocks. The ship's Ordnance/ Weapons Officer is responsible for accounting, managing, and signing for these stocks. As the manager of the LFORM account, the CCO is responsible for:

a. Validating LFORM breakout requirements and ensuring compliance with COMNAVSURFLANTINST 4080.1/COMNAVSURFPACINST 4080.1.

b. Preparing and distributing the LFORM Supplement; using fielded logistics automated information systems to accomplish this task.

c. Validating the proper loading and stowage of all Class V products in accordance with the load plan.

d. Reviewing the LFORM TIRs and Ammunition Shortfall messages prior to their release.

e. Conducting periodic reviews/reconciliations of the LFORM Supplement.

f. Monitoring/reviewing all NAR, Ammunition Information Notice (AIN), and Overhead Fire messages for

potential impact on LFORM Class V stocks.

CHAPTER IV

SHIP TO SHORE MOVEMENT

1. **General**. The ship to shore movement is part of the assault phase and is the most critical part for several reasons. During this period, the LF and assault shipping are the most concentrated. Troops, whether transported by surface or aircraft, are particularly vulnerable to enemy fire of all types. Movement control requirements are complex and must be coordinated precisely with the fires of supporting arms. Finally, the natural hazards of weather, sea, and surf conditions must be overcome.

a. Ship to shore movement is designed to ensure the rapid landing of troops, equipment, and supplies at the prescribed times and places and in the formation required by the landing force to support the scheme of maneuver ashore.

b. With an approved concept of operations ashore, landing force and naval requirements to accomplish the mission are consolidated and compared with the means available to CATF (forces, lift, logistics, etc.). If means available do not satisfy requirements, additional means are requested from higher authority or the concept of operations is adjusted accordingly.

c. Ship to shore movement commences on the order of the CATF to "land the landing force." Movement is concluded when unloading of assault shipping is completed. This movement is divided into two periods:

(1) Assault and Initial Unloading Period. Primarily tactical in character and must be instantly responsive (selective unloading) to LF requirements ashore.

(2) General Unloading Period. Primarily logistical in character, it emphasizes speed and volume during unloading.

d. The ATF landing plan is prepared after final allocation of means is made. It is composed of naval and LF documents which provide detailed instructions for executing the helicopterborne and waterborne movement. It consists of the movement, supporting fire, and combat service support (CSS) plans. The principal determining factor when developing the landing plan is the concept of operations ashore. As the basis for the landing plan, the concept of operations ashore itself is influenced by many factors; e.g., intelligence on enemy dispositions, the combat power available, and the available landing zones. The concept of operations is the basis on which all subsequent, inverse planning for the amphibious operation as a whole is predicated.

e. The ship to shore movement plan must support the landing force scheme of maneuver by landing the "right units, equipment, or supplies, at the right place, and the right time". Items that are considered in the development of the ship to shore movement plan are depicted in Figure IV-1.

- Means
- Location of beaches, landing zones
- Composition of assault waves
- Tactical integrity of the LF
- Assault shipping dispersal
- Timing of assault waves
- Oceanographic features of beach approaches
- Beach capacity for movement of supplies to support the landing plan
- OTH or near shore launch

Figure IV-1, Ship To Shore Movement Planning Considerations

f. The ship to shore movement plan is issued by CATF and CLF as an appendix to the amphibious operation order (OPORD), message OPORD supplements, or an APP-4, "Allied Tactical Messages (U)," formatted message such as the operational tasking amphibious (OPTASK AMPHIB).

2. **Supply and Movement Categories.** The ship to shore movement of landing force troops, supplies, and equipment are broadly classified as waterborne movement and helicopterborne movements. For convenient reference in planning and to promote flexibility during its execution, two categories of supplies and five categories of movement are employed.

a. Supply Categories:

(1) Landing Force Supplies. LF supplies are all those supplies and equipment that accompany the LF in assault echelon (AE) and assault follow-on echelon (AFOE) shipping and comprise the projected initial supply support to sustain the LF until arrival of resupply in the AOA. This supply category is further broken down into basic loads, pre-positioned emergency supplies, and remaining supplies.

(a) Basic loads. Types and quantities of supplies that the commander directs his unit to carry. Basic loads are often referred to as D-1 supplies.

(b) Pre-positioned emergency supplies. Used for replenishment early in the assault. They may be further broken down into floating dumps that can be delivered either by surface craft of helicopter.

(c) Remaining supplies. Constitute the major portion of supplies from the AE and AFOE. They are mostly unloaded during general unloading and may be used to build dumps ashore.

b. Resupply. Resupply consists of the supply support transported into the AOA by follow-on shipping subsequent to the landing of the AE and AFOE shipping. Resupply also includes host-nation and inter-service support in on-call status from aircraft or ships.

c. Movement Categories (Troops and Equipment):

(1) **Scheduled Waves**. Scheduled waves transport the initial assault elements of the landing force (i.e.. Battalion Landing Team) with their basic loads of equipment and supplies via surface craft, helicopter, or a combination of the two modes. The time, place, and formation for landing are predetermined jointly by the CATF and CLF. For helicopterborne movement, scheduled waves may require multiple lifts to completely land the helicopterborne assault elements. The Assault Schedule and Helicopter Employment and Assault Landing Table (HEALT) represent the two source documents for identifying scheduled wave composition, timing, and sequencing.

(2) **On-call Waves**. On-call waves consist of the elements of the LF and their initial combat or emergency supplies whose need ashore at an early hour is expected, but whose time and place of landing cannot be accurately predetermined. They are elements subject to immediate or emergency call and are positioned so as to be available for landing shortly after H-hour. Because the units in on-call waves have a high priority for landing, their number should be kept to a minimum consistent with transportation asset availability and expected requirements ashore. The landing of any other elements may be preempted to permit the landing of on-call waves.

(3) **Non-Scheduled Units**. Requested by serial number, nonscheduled units are not landed until requested and normally are not loaded until requested. They are second in priority for use of helicopters. The need for such elements ashore is usually not of an emergency nature. Therefore, they are landed when their employment ashore is appropriate, normally upon completion of scheduled landings. Once started, landing of nonscheduled units may be interrupted to permit landing of on-call waves, pre-positioned emergency supplies, or other selected supplies or equipment for which there is a greater requirement ashore. This category can include combat, combat support, and Combat Service Support elements of the LF not included in the scheduled or on-call waves. Examples are LF reserve, general support artillery, LFSP elements, antiaircraft units, aviation ground support units, and headquarters elements of LF ground combat, aviation combat, and CSS elements.

(4) **Pre-positioned Emergency Supplies**. Pre-positioned emergency supplies are designated by the CLF to meet expected critical needs for supply replenishment. These supplies are available for immediate delivery to units ashore. This category is further divided into floating dumps (surface ship to shore) and pre-staged helicopter-lifted supplies. Pre-staged helicopter-lifted supplies are prepackaged units of

selected supplies that are positioned aboard helicopter transports and other suitably configured ships for rapid air delivery to units ashore. They may be employed in support of both helicopterborne and surface assault units.

(5) **Remaining Landing Force Supplies.** This category is comprised of replenishment supplies and equipment not included in the unit commander's prescribed loads, floating dumps or pre-staged helicopter lifted supplies. It constitutes a major portion of the supplies transported into the area of operation in assault echelon and assault follow on echelon shipping. Landing force supplies are selectively delivered ashore until prescribed dump levels are reached. The bulk of the remaining supplies are landed during general unloading.

(6) As a point of clarification, further discussion is required on the matter of floating dumps. Because of the limited amount of combat supplies initially loaded, it is necessary to replenish supplies ashore soon after the assault begins. This need is met by establishing floating dumps in proximity of beaches. Floating dumps consist of pre-planned, balanced loads of emergency supplies in landing craft, helicopters or amphibious vehicles that are landed on request. Once these stocks are landed, the requirement to immediately reconstitute like packages may surface.

3. **Landing Serials.** Discussion of the movement categories listed above requires a detailed knowledge of landing serials.

(a) For embarkation purposes, a serial is a troop unit or grouping of supplies and equipment that are to be:

(1) Embarked entirely in one ship.

(2) Landed as a unit on a specified beach, CLZ or HLZ.

(3) Landed at the same time.

(b) The purposes of serial numbers is to act as a code to identify the grouping of units or equipment, provide speed, brevity, and security in communication, and to provide a means of verifying that all elements ordered to land are landed.

(c) Serial numbers are a means of identification, not a statement of priority, and are published in the Serial Assignment Table, which is included in the landing plan. The planned order for landing serials is published in the Landing Sequence Table of the landing plan. It is an arbitrary number assigned to identify each element of the LF, in either the AE or the AFOE, to be landed before general unloading commences.

4. **Landing Plan Documents – Surface Assault**. Listed in order of their preparation, these documents represent the end-state of detailed, integrated, and concurrent planning between the landing force and naval staff. Preparation of the ship to shore movement planning documents can not occur until the landing force concept of operations is complete and the number and type of landing craft and amphibious vehicles (AAV) are identified. Each of these documents paints a picture of how the assault will be conducted.

a. Assault Area Diagram. This diagram is actually an overlay developed by the Navy. It is drawn to an appropriate level scale to support the charts being used and identifies:

- ♦ Beach designations
- ♦ Boat lanes
- ♦ Landing ship areas
- ♦ Transport areas
- ♦ LCAC lanes, penetration points, and landing zones
- ♦ Line of Departure
- ♦ Fire support areas in vicinity of boat lanes

b. Transport Area Diagram. This diagram is an overlay also prepared by the Navy. It covers the area extending from at least 1000 yards off the beach to the seaward edge of the outermost anchorage/operating area. It contains:

- Transport area and anchorage assignments
- Landing ship areas and anchorage's
- Boat and approach lanes
- AAV launch area
- LCAC launch area and lanes
- LCAC landing zones
- LHA/LHD/LPH areas
- Control ships
- Line Of Departure
- Causeway area
- Control/penetration points

c. Sea Echelon Plan. Prepared by the Navy, this plan depicts:

- Individual ship sea echelon areas
- PCO station
- LHA/LHD/LPH areas
- Fire support areas
- LCAC launch areas and lanes
- LCAC landing zones.
- Swept lanes
- Line of Departure
- In-bound/Out-bound lanes
- Beach designations
- Control and penetration points

d. Landing Diagram. Prepared by the Landing Force, this diagram provides information on the tactical deployment of units for the beach assault by showing the timing and composition of scheduled waves.

e. Landing Craft and Amphibious Vehicle Assignment Table. This table indicates the organization of landing force units into boat teams and the assignment of boat teams to scheduled waves, on call waves, and non-scheduled units. It is prepared by the Landing Force.

f. Landing Craft Availability Table. This table, prepared by the Navy, reflects:

- Type and number of landing craft available by ship
- Total number of landing craft required to support Navy requirements
- Total number of landing craft available for landing force use

g. Amphibious Vehicle Availability Table. Prepared by the Landing Force, this table lists the type and number of amphibious vehicles available for assault landings and the ship in which they are embarked.

h. Serial Assignment Table. Prepared by the Landing Force, this table provides a sequential numerical list of the serial numbers. Within each serial number it identifies the specific personnel, supplies, and equipment linked to that serial and the anticipated landing craft requirements to move that serial. The Serial Assignment Table is not to be interpreted as the offload sequence. The Assault Schedule and Landing Sequence Table provide this information.

i. Landing Sequence Table. Prepared by the Landing Force, this table provides the anticipated landing sequence of non-scheduled units (those not listed in the Assault Schedule).

j. Assault Schedule. Prepared by the Landing Force, the Assault Schedule prescribes the formation, composition and timing of waves landing over beaches. Both assault and on-call serials are reflected.

k. Landing Craft Employment Plan. This plan is prepared by the Navy and assigns movement of landing craft from ships to satisfy naval and landing force requirements. It indicates the number, type, and parent ship of landing craft assets and the ships to which they report, time to report and period or duration of the attachment. Additionally, it allocates boats to boat waves in accordance with the Landing Diagram.

l. Amphibious Vehicle Employment Plan. Prepared by the Landing Force, this plan reflects the planned employment of AAVs in landing operations to include their employment after the initial movement to the beach.

m. Approach Schedule. Prepared by the Navy, this schedule indicates, for each scheduled wave, the time of arrival at and/or departure from: (1) the parent ship, (2) the line of departure, and (3) the beach.

n. Assault Wave Diagram. Prepared by the Navy, this diagram reflects the assault waves as they will appear at H-Hour through the completion of all scheduled waves.

o. Beach Approach Diagram. This diagram is actually a large-scale chart overlay prepared by the Navy that covers from the beach to 300/500 yards seaward of the Line of Departure (LOD). The diagram includes the designation and dimensions of landing beaches, LOD, distances to beach, position of PCS, SCS, BGC, ABGC, etc. after the last scheduled wave has landed, the position of personnel and cargo, transfer lanes and boats, and the boat return lanes.

p. Consolidated Landing and Approach Plan. This plan is nothing more than a consolidation of the Landing Craft Employment Plan and the Approach Plan. It is used in lieu of two separate documents and is prepared by the Landing Force.

q. Debarkation Schedule. The ship's Commanding Officer and the CO of Troops prepare this schedule jointly. It assigns debarkation stations to all personnel, establishes boat and helicopter teams, and includes units loaded via the well deck.

r. Landing force planning documents for ship to shore movement are found as enclosures and tabs to appendixes of annex R to the Landing Force Operations Order.

5. **Landing Plan Documents – Helicopter Assault**

a. Helicopter Availability Table. This table is prepared early in the planning phase to provide LF and helicopterborne unit commanding officers with basic information with which to determine the employment of available helicopters. It identifies the helicopter units, number of helicopters available for first and subsequent lifts, tentative load capacity, and ships on which the helicopters are to be transported.

(1) Available figures pertain only to D-Day operations and include estimates of expected losses to helicopter availability due to maintenance factors and enemy action.

(2) Originally prepared by the senior helicopter unit commander and submitted to CLF for inclusion in the landing plan.

b. Heliteam Wave and Serial Assignment Table (HWSAT). This table is prepared by the commander of the helicopterborne unit, assisted by the helicopter unit commander, in coordination with the ship's commanding officer. It identifies each heliteam with its assigned serial number and specific serial numbers within the flight and wave. All movement/landing categories are included with scheduled waves organized into helicopter waves and listed in numerical sequence and on-call and nonscheduled serials listed in the planned sequence of landing following the scheduled waves. If necessary, prepackaged supplies may also be serialized and included. This document delineates what personnel, supplies, and equipment will be loaded on a specific aircraft.

(1) Loads for each helicopter are defined by:

(a) Tactical units (Troop Unit).

(b) Supplies and equipment (the average combat load is 240 lbs. for each Marine, any particularly heavy equipment or supplies are listed separately in this column). The weight column ensures that troop units do not exceed maximum helicopter payloads.

(2) Preparations are necessary to determine effective utilization of helicopters, detail lift requirements, and develop a planned sequence of debarkation and serialization of the units involved.

c. Helicopter Landing Diagram. This diagram is a graphic depiction of the approach and retirement lanes from the helicopter transport area to the landing zones (LZs). It includes the measures established to control the helicopter movement. Such details and remarks, as are necessary, will also be shown such as flight altitude and width of lanes.

(1) The diagrams are prepared by the senior helicopter unit commander in coordination with the cognizant helicopter transport group/unit commanders and are submitted through the chain of command to the CATF for approval and coordination with planned supporting fires.

(2) Control measures included in the Helicopter Landing Diagram (refer to Figure IV-2) include:

(a) Landing Zones (LZs). Specified ground area for landing assault helicopters to embark or debark troops and/or cargo. Each LZ may contain one or more landing sites. They are usually designated by a code name, traditionally a bird.

(b) Landing Site. A subdivision of an LZ where single flights or waves of helicopters land. Landing Sites do not have to be geographically continuous. They are usually designated by a color.

(c) Landing Point. This is the point where one helicopter may land. It is designated by a two-digit number.

(d) Approach and Retirement Routes. These routes consist of a track or series of tracks relative to the earth's surface over which helicopters move to and from a specified LZ in coordination with fire support plans. They are located so as not to interfere with the waterborne movement and are designated by the names of states.

(e) Wave Rendezvous Points (WRP). A position designated for assembling loaded helicopters when conducting operations. These points are located at a given altitude and position relative to the departure point.

(f) Departure Point (DP). An air control point at the seaward end of the helicopter approach route system from which helicopter waves are dispatched along the selected approach route to LZ.

(g) Penetration Control Point (PCP). Point along helicopter approach route at which helicopter waves penetrate a hostile coastline during the ship to shore movement. Once an aircraft reaches the PCP, it is considered “Feet Dry” and over dry land.

(h) Control Point (CP). This is a position marked by a buoy, ship or craft, electronic device, or conspicuous terrain feature. It is used as an aid to navigation and to control helicopters enroute to their designated LZ. Usually CPs are designated by the names of cities within the state used for the approach and retirement routes.

(i) Initial Point (IP). An air control point in the vicinity of a LZ from which individual flights of helicopters are directed to the prescribed landing sites.

(j) Break-up Point (BP). This is an air control point at which helicopters returning from a LZ break formation and are released to return to individual ships or dispatched for other employment. It may be the same point, geographically, as the Departure Point.

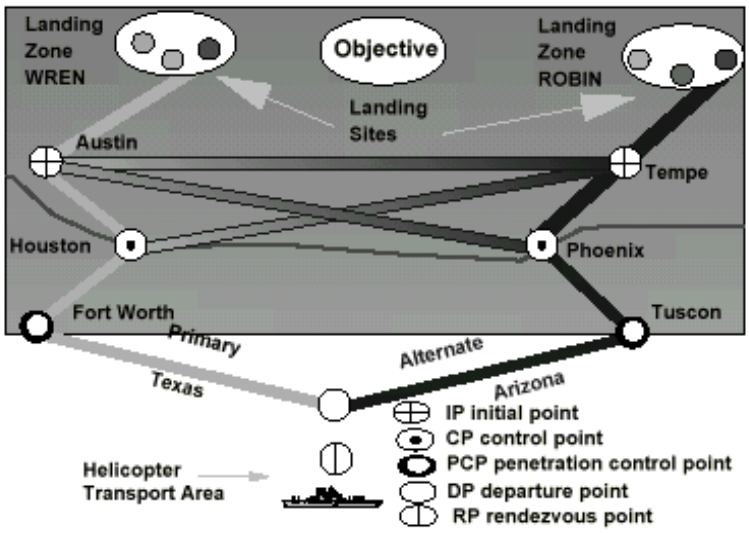

Figure IV-2, Helicopter Landing Diagram

d. Helicopter Employment and Assault Landing Table (HEALT). This table is a detailed plan for the movement of helicopterborne troops, equipment and supplies. It provides the landing timetable for the helicopter movement and indicates the assignment of specific troop units to specific numbered flights and their HLZ/landing sites. It is the basis for the helicopter unit's flight schedules and the control of helicopter movement by the appropriate air control agency. The commander of the helicopterborne unit and the associated helicopter unit commander prepare the HEALT.

(1) Each successive echelon of command makes necessary changes and consolidates the appropriate tables. Once complete, the final approving authority prepares/publishes the final approved consolidated tables.

(2) Upon publication, lower echelons publish extracts pertaining to their units. Close coordination between the HDC and the embarked landing force elements is required to ensure execution of the desired plan.

6. **Navy Ship-to-Shore Control Organizations.** The Navy ship to shore control organizations are responsible to CATF for the movement of ships, landing craft, amphibious vehicles, and aircraft from the transport and landing ship areas to landing beaches. These organizations keep CATF, CLF, and other designated commanders informed of the progress of the movement from ship to shore, the landing of various waves, and the visible progress of operations on shore. The exact organization is based on the number and arrangement of landing beaches used for the assault.

a. Central Control Officer (CCO). The CCO is CATFs representative for overall coordination of the surface assaults. A CCO is assigned when ship to shore movement to two or more colored beaches are planned. His duties include assigning the Primary Control Officer, Secondary Control Officers, and controlling transport units in the transport area.

b. Assistant Central Control Officer (ACCO). The ACCO coordinates the movement of landing craft, vehicles, and ships in his assigned areas of responsibility and is only used for large-scale operations.

c. Primary Control Officer (PCO). The PCO directly controls the movement of all waterborne craft employed in transporting the landing force, beach party personnel, supplies and equipment to and from a colored beach. The PCO is embarked on the Primary Control Ship (PCS); which provides the control team to effect the tracking/controlling effort. Figure IV-3 reflects general duties of the PCO. A PCO is normally designated in the following situations involving the waterborne movement of the landing force:

(1) Landing a regimental landing team or a smaller troop organization over a colored beach.

(2) Back loading of a landing force across the beach when amphibious assault maneuvers have been terminated.

(3) Loading the landing force prior to sailing for the amphibious objective area.

(4) Offloading all or part of the landing force at or near the AOA (not using timed waves)

(5) On or off loading all or part of the landing force for training purposes

- Control all boats assigned to PCS
- Briefs Boat Crews/Officers on Landing Plan
- Maintains location/status of all boats
- Monitors surf conditions
- Maintain status of embark/debark
- Ensure max utilization of landing craft
- Direct returning landing craft to ships
- Monitor boat fuel ops/status
- Publishes the PCS Intentions Message
- Designates PCS/Boat communications
- Briefs Nav and Salvage Operations
- Directs waves to their assigned beach
- Monitors long/short term weather
- Monitor/control all surface traffic
- Monitor repair of damaged boats
- Maintain an accurate plot of ships
- Make boating termination recommendations

Figure IV-3, General Duties Of The PCO

d. Secondary Control Officer (SCO). The SCO performs the same functions as PCO so that he is prepared to assume duties of PCO in event of emergency. The SCO is embarked on the Secondary Control Ship (SCS) and monitors all radio circuits and the movement of all waves being controlled by the PCO.

e. Boat Group Commander (BGC). Embarked in an LCPL displaying the zero flag over beach color flag, the BGC is responsible for the discipline and organization of the boat group. He ensures that the boat waves maintain proper position in the rendezvous area, and when dispatched from the LOD:

(1) Leads the first wave to the line of breakers.

(2) Turns to the beach flank adjacent to the boat return lane to assist succeeding waves in their approach.

(3) Assumes duties of traffic control officer for the beach, reporting as such to the Beachmaster.

(4) Directs traffic in the boat return lane after boats retract.

f. Assistant Boat Group Commander (ABGC). The ABGC is embarked in a craft displaying the whiskey flag over the colored beach flag. He is responsible to and should be prepared to assume duties of the BGC. The ABGC is charged with keeping assembly areas organized and checking on stragglers. The ABGC also:

(1) Expedites boats leaving designated assembly areas to go alongside amphibious shipping for loading.

(2) Assists in the dispatching of waves (subsequent to first wave) to the rendezvous area and from there to the LOD, following the last scheduled wave to the surf zone.

(3) Assumes the duties of senior salvage officer afloat after the landing of all scheduled waves; reporting to the Beachmaster.

g. Boat Wave Commander (BWC). The Boat Wave Commander is embarked on a landing craft and is responsible for proper wave organization and for discipline of boats in the wave to include maintaining specified interval and distance. Additionally, the BWC:

(1) Ensures readiness for movement at proper time

(2) Adjusts speed to maintain proper interval from other waves and to cross the LOD and arrive at the proper beach at the designated time.

(3) Controls retraction of a wave from the beach while ensuring the orderly return to PCS or SCS.

h. Wave Guide Officer (WGO). The WGO is assigned to each wave of amphibious vehicles. The duties of the WGO include:

(1) Forming up amphibious vehicles and guiding them to position to seaward of LOD, acting as a safety boat.

(2) Reporting to the PCS and providing information relative to the readiness of his/her wave.

(3) Taking station ahead of his wave, or on the left flank and leading the wave up to and across the LOD on signal from the PCS.

(4) Ensuring that the wave is maintaining proper position in the boat lane and reaches the assigned beach on time, assisted by direction from PCS. An important footnote to the WGO duties is that the AAV Commander will assume these duties during an actual assault.

i. LCAC Control Officer (LCO). The LCO directly controls the movement of all Landing Craft Air Cushion (LCAC) assault craft employed in transporting landing force personnel, supplies, and equipment to and from a colored beach. The LCO is embarked on the LCAC Control Ship (LCS), which provides the control team required to effect LCAC tracking/controlling efforts. The LCO reports to the PCO.

j. LCAC Control. There are three means by which LCAC can be controlled. If the LCAC controls themselves this is considered independent control. Advisory control is maintained when the LCAC is vectored from the launch area to the first control point. Finally, positive control can be used whereby continuous position updates are provided. Each of these control measures can be accomplished by the LCAC commander, LCO, or by the PCO. Some of the common LCAC control reference features include:

(1) Craft Launch Area (CLA). The CLA may be located a few thousand yards to 100 miles offshore. It is of sufficient size to permit underway launch.

(2) Craft Departure Point (CDP). The CDP is a geographical position that marks the seaward end of a transit lane.

(3) Craft Transit Lane. Determined by CATF, the transit lane width is dependent upon LCAC formation, topographic considerations, and the mine threat. In some instances you may require lanes for each sortie, approach, and return.

(4) Craft Control Point (CCP). The CCP is a geographic position determined by PCO to control ship to shore movement.

(5) Craft Penetration Point (CPP). The CPP is a geographic position where the LCAC crosses the high water mark.

(6) Craft Landing Zone (CLZ). Determined by CATF, the CLZ is an area where landing force material will be offloaded. A specified area within a CLZ, which provides an 80-100 yard diameter area for LCAC, is called an LCAC Landing Site (CLS).

7. **Air Control Agencies and Airborne Ship-to Shore Movement**. The Tactical Air Control System is divided into two major sections with a number of subordinate agencies. For the Navy there is the Tactical Air Control Center, and working closely with them, is the Supporting Arms Coordination Center.

a. Control of the helicopterborne movement is exercised by the CATF. Aircraft units employed in the movement are subordinate elements of the LF. These units execute the ship to shore movement in accordance with the CATFs landing plan and controls that are established on the basis of LF requirements. Plans include provisions for reversion of control of aircraft operations to the CLF when the situation ashore permits. CATF employs TACGRU and the aircraft transport group/unit commanders to plan and conduct the helicopterborne movement. CLF employs the TACLOG group to assist Navy control officers.

b. Agencies concerned with the helicopterborne movement and the procedure for control include:

(1) Tactical Air Control Center (TACC) Afloat. The TACC afloat is organized and equipped to exercise control and/or coordination of all aircraft, including helicopters, in the AOA. During the helicopterborne movement, the TACC exercises control over all aircraft; coordinates aircraft movements with supporting arms and other air operations; and maintains the current status of aircraft and landing platforms and the progress of the helicopterborne assault(s).

(a) Tactical Air Control Group (TACGRU)/Tactical Air Control Squadron (TACRON). The TACGRU/TACRON operates Tactical Air Control Center (TACC) afloat or Tactical Air Direction Center (TADC) to control all aircraft in the AOA and provides aircraft control and warning facilities afloat for offensive and defensive missions within the AOA. A USMC or Army officer may be assigned. If USAF aircraft are involved an Air Force liaison officer will be assigned. The OIC of the TACRON (Det) usually stands Tactical Air Controller (TAC) billet and Tactical Air Officer (TAO) duties.

(b) Tactical Air Controller (TAC) and Tactical Air Officer (TAO). The TAC is the officer in charge of all operations in the TACC afloat. Aircraft movements must be closely coordinated with the other users of airspace; e.g., fixed-wing aircraft and supporting fires. The tactical air officer (TAO), located in the TACC, is responsible for this coordination. The LF TACLOG provides liaison to the TAO.

(2) Tactical Air Direction Center (TADC). The TADC is a subordinate air operations installation of the TACC afloat or ashore, from which aircraft and air warning service functions of the tactical air operations in an area of responsibility are directed.

(3) The Aircraft Transport Group Commander. This individual is responsible for matters related to flight control of his aircraft. This control is exercised through the HDC and the helicopter logistics support center (HLSC). The helicopterborne assault force TACLOG, collocated with the HDC and HLSC, provides the necessary liaison.

(4) Helicopter Coordination Section (HCS). As an integral part of the TACC afloat, the HCS is the specific section that coordinates all helicopter operations decentralized under the control of subordinate helicopter control agencies. The HCS is organized into two units: A Helicopter Coordination Unit (formally helicopter control unit), concerned with the actual employment and coordination of helicopters; and a Helicopter Advisory Unit, concerned with maintaining current data on the status, availability, locations, and progress of the helicopterborne assault(s). Additionally, the HCS is normally augmented with personnel from the aviation combat element (ACE) of the LF.

(5) Helicopter Direction Center (HDC). The actual control and direction of helicopterborne ship-to-shore movement is decentralized to the HDC(s), which is/are subordinate to the TACC afloat. The HDC is/are embarked aboard the helicopter transport capable ships – normally an LHD or LHA.

(a) Major functions of the HDC(s), under the overall supervision of the TACC afloat, are as follows:

1 Control the movement of all helicopters operating within its assigned control areas and in accordance with the concept of operations.

2 Control escort aircraft when directed by the TACC.

3 Maintain and report to the TACC the status and location of assigned helicopters.

4 Advise the TACC on all matters pertaining to the movement of the helicopters within its control area that may require coordination with supporting arms.

5 Coordinate all changes to the HEALT with the HLSC.

6 Control the movement of medical evacuation helicopters based on the advice of the ATF medical regulating control center (MRCC).

(b) The HDC(s) is/are collocated are closely integrated with the TACLOG, HLSC, and MRCC. During operations, the helicopter assault force TACLOG monitors requests from assault units or their CSS elements ashore. Requests for delivery by helicopter are forwarded through the HLSC, which coordinates the debarkation of serials in accordance with the landing plan. The requests are then forwarded to the HDC(s) for execution. The MRCC recommends to HDS the particular medical facility to which MEDEVAC helicopters should be directed.

(c) When the Direct Air Support Center (DASC) is established ashore, it assumes responsibility for HDC operations as directed by the TACC. Within the DASC is the helicopter director, who is responsible for the coordination and control of helicopters operating under control of the DASC. When and to the extent that air control ashore is exercised by US Air Force elements, agencies are established in accordance with US Army-US Air Force procedures for air-ground operations, however, air control agencies ashore must be compatible and capable of functioning with other air control agencies of the ATF.

(6) Helicopter Logistic Support Center (HLSC).

(a) The HLSC is located aboard the helicopter flagship close to the HCS detachment. It coordinates the debarkation of air serials during large-scale operations in accordance with the landing plan, under the control of the helicopter logistics coordinator (HLC), a Navy officer, comparable to the PCO of a waterborne movement.

(b) The troop commander ashore or the LFSP (or HST) will request on-call, nonscheduled serials and emergency resupply based on priorities. The HLSC processes all air requests through the HCS and, once approval is given, notifies the debarkation control officer on the applicable ship to prepare for helicopter operations and the nature of the mission.

(c) The coordination that the HLSC performs is dependent on the communications (logistics) nets available. The helicopter assault force TACLOG, located aboard the central control ship, monitors such requests and assists as required. TACLOG informs the requesting ground commander or the supporting CSS element of mission approval, the type and number of aircraft, the expected time of arrival at his position, and the helicopter route if applicable. This information is required by the ground unit's FSCC for fire support coordination. Once helicopter control is passed ashore, the DASC will provide this information.

(7) Control Ashore - Direct Air Support Center (DASC).

(a) The DASC is normally the first LF air control agency established ashore. It is designed for control and direction of Offensive Air Support (OAS) including Close Air Support (CAS), Assault Support (AS) and other tactical direct air support operations. Operates under the direction of the LF Aviation Combat Element commander (ACE)/Tactical Air Commander (TAC).

(b) The DASC controls and directs tactical direct air support, and controls helicopters when control has been passed ashore.

(c) An MRCC is co-located to advise on matters dealing with casualty movement.

(8) Assault Support Coordinator (Airborne) (ASC(A)).

(a) The ASC(A) is an experienced naval aviator operating from an aircraft to direct airborne coordination and control of helicopter assaults. The ASC(A) is responsible for the airborne control of all helicopters in his assigned area and coordinates with the Tactical Air Coordinator (Airborne) (TAC(A)) or Forward Air Controller (Airborne) (FAC(A)), as appropriate, for support of CAS aircraft, as determined by the TAC.

(b) When an ASC(A) has not been designated, the helicopter transport flight leader may, within the limits of his authority, discharge the duties of the ASC(A) requisite to mission accomplishment.

(c) If employed in conjunction with the TAC(A), the relationship between the two will be established by the TAC or his designated representative.

(d) The ASC(A) may function as an extension of the DASC, ASC(Surface) or HDC in situations in which those agencies delegate specific authority to him for specific missions.

(e) The ASC(A) and helicopterborne unit commander should normally be assigned to a single aircraft where feasible in order to facilitate timely and coordinated decisions affecting the helicopterborne assault.

(9) Tactical Air Coordinator (Airborne) (TAC(A)).

(a) The TAC(A) is an officer who coordinates from an aircraft the action of combat aircraft engaged in close support of ground or sea forces. The TAC(A), as an on-site airborne extension of the DASC, TACC or TADC, is normally the senior air coordinating authority over all aircraft operating within his assigned area of responsibility.

(b) The specific authority exercised by a TAC(A) will be as specified or delegated by the DASC, TACC or TADC, as appropriate.

(c) During helicopterborne assault operations, and other operations where an ASC(A) is employed, the relationship between the TAC(A) and the ASC(A) will be established during the planning phase by the TAC or his designated representative.

(d) The TAC(A)'s principal responsibilities are to deconflict aircraft and coordinate employment of supporting aircraft with other supporting arms. In fulfilling this responsibility, the TAC(A) coordinates as necessary with the ASC(A), ground commanders' Tactical Air Control Parties (TACPs)s, Fire Support Coordination Centers (FSCCs), subordinate FAC(A), and the fire direction centers of artillery and naval gunfire.

(e) The TAC(A) may or may not be assigned depending on mission requirements and aircraft availability. When assigned, the TAC(A) is subordinate to the DASC or the TACC or TADC.

8. **Helicopter Employment Considerations and Limitations.** Helicopter assault movement planning is a corporate effort produced by CATF and CLF chains of command employing concurrent, parallel, and detailed planning. The unique qualities and capabilities associated with a vertical assault warrant a review of helicopter employment considerations; especially given the ability to employ them from OTH to achieve tactical surprise.

a. The following employment considerations must be weighed.

(1) The quantity and types of helicopters available.

(2) Number of helicopter-capable ships available that can operate and maintain helicopters and that can only operate helicopters.

(3) Location, nature, number and size of HLZs and their approach and retirement lanes.

(4) Enemy capabilities and dispositions, especially location, type, and density of anti-aircraft weapons. A necessary ingredient for a successful helicopterborne operation is control of the airspace in which friendly forces operate (air superiority). Transport helicopters, especially in large formations, are vulnerable to surprise air attack by air-to-air missiles and anti-aircraft/defense artillery (AAA)/(ADA).

(5) Oceanographic/weather influences such as sea state during launch/recovery operations and the expected weather conditions to be encountered en route, and at the HLZ. This includes ceiling, visibility, icing, winds and turbulence.

(6) Requirements for supporting arms, linkup and CSS.

(7) Availability of alternate plans for landing serials scheduled for helicopterborne waves aborted during the landing.

b. Helicopter Limitations. The limitations of all helicopters must be used as their criteria for employment. Therefore, when capabilities and limitations are discussed, they are in terms of employment considerations.

(1) Helicopters require greater quantities of fuel than surface vehicles performing similar tasks. A greater maintenance effort is required for helicopters than for other types of transportation.

(2) In certain operations, secrecy may be compromised by engine and rotor noise or dust in the landing zone.

(3) Helicopter operations are severely limited when icing conditions prevail. Helicopter lift capability is affected by changes in atmospheric conditions; i.e., altitude, wind, and temperature.

(4) Weight and balance of internal loads must be carefully computed to ensure safe and efficient flight. Questions regarding the maximum weight authorized for each aircraft type should be directed to either the ship's Air Operations Officer or the aircraft squadron Operations Officer. Figure IV-4 provides helicopter load planning data.

Type Aircraft	Combat Loaded Troops	Admin Troops (PMC)	Internal Cargo Weight (lbs)	External Cargo Weight (lbs)
CH-53E	24	37	15,000	36,000
CH-53D	24	37	8,000	24,000
UH-1N	06	08	1,400	1,400
CH-46	12	12	3,000	3,000
CH-47	31	31	50,000	25,000
SH-60	11	20	22,000	8,000
MV-22	24	24	20,000	15,000
Note: Capabilities/capacities identified above are for planning purposes only. Maximum internal or external load capabilities may be lower depending on weather conditions, aircraft fuel load, and limitations of specific aircraft type, model, series.				

Figure IV-4, Helicopter Load Planning Data

(5) Various weather phenomena affect helicopter operations in many different ways. Low ceilings can reduce the effectiveness of, or preclude the use of, fixed-wing aircraft providing escort, LZ preparation, and close air support of the helicopterborne force.

(6) Helicopters are vulnerable to nuclear blast effects, anti-aircraft fire, small arms fire, and enemy aircraft.

(7) Large-scale employment of helicopters is dependent upon good visibility, adequate landing areas, and protective measures.

(8) All helicopter operations require precise coordination for deconfliction with other air operations and supporting arms.

9. **Planning for Wave, Beach and Surf Conditions**

a. **Selection of beaches**. Within limits set by strategic and tactical considerations, landing areas should be selected with reference to surf and beach conditions under exposure to different wave conditions. After the hydrography of each area has been obtained, wave refraction diagrams should be drawn to show the variations in surf conditions along the beach for wave periods and deep-water directions over the entire possible range. Alternative landing plans for each landing area will be desirable if the analysis shows markedly different surf conditions under exposure to waves of different possible directions and periods.

b. **Selection of ships and vehicles**. The selection of ships and landing craft with relation to anticipated surf conditions should be completed during the early planning stage of an operation. It is possible to plan for surf at this stage only on a statistical basis, but the probability of light or heavy surf action at the time and place of the landing should not be ignored. On shores noted for severe surf, there are some days of relative calm. On shores where the surf is normally light, there are usually some days of heavy surf. However, it is unwise to assume abnormal conditions will exist.

c. Key information that should be obtained during the planning phase of an amphibious operation includes:

(1) Prevailing winds and surf

(2) Refraction diagram and currents

(3) Prevailing sea and swell tides

(4) Beach slope and materials

(5) Beach irregularities

d. While the above information satisfies planning phase requirements it does not meet the data requirements for D-Day. Figure IV-5 highlights data considered essential for D-Day operations. This information may be provided to amphibious planners by pre-assault forces using standardized reporting procedures.

Surf and Swell conditions	Tides
Depth of water and beach slope	Currents
Beach features (bars, troughs)	State of the sea
Width of the surf zone	Depth of breaking
Significant breaker height	Longshore currents
Angle of breakers to the beach	Period of breakers
Wave length outside breaker line	

Figure IV-5, D-Day Beach Selection Criteria

10. **Surface Observation Reporting.** Surf conditions are reported by various organizations. Usually SEALS, Beachmasters or Force Reconnaissance personnel provide this information, depending upon the specific operation, since they are all trained to perform this task.

a. Elements of a Surf Observation (SUROB) Report. The observing force is required to observe 100 breakers (50 in a combat or hostile environment). Once this has been accomplished the reporting unit follows the following format for a numbered beach on a given date and at local time:

(1) **ALFA**: Significant breaker height: The average height of the 1/3 highest breakers on that beach.

(2) **BRAVO**: Maximum breaker height: Is the highest breaker observed on that beach.

(3) **CHARLIE**: Period of breaker: The time interval between breakers.

(4) **DELTA**: Which is the type of breakers and percentage of each.

(5) **ECHO**: Breaker angle: The acute angle, in degrees that a breaker makes with the beach and its direction relative to the beach (right/left flank).

(6) **FOXTROT**: Littoral current: The long shore currents direction and speed.

(7) **GOLF**: The number of lines of breakers in and the width of the surf zone measured in feet.

(8) **HOTEL**: Remarks: Information important to landing operations such as wind direction and velocity, visibility, debris in the surf zone, secondary wave system, dangerous conditions, etc.

b. The information provided by SUROB reports is processed accordingly (using modification tables) by the Primary Control Officer. The final product is an abstract number called "MODIFIED SURF INDEX" that gives planners an idea of the feasibility of the landing for each different craft available.

11. **Modified Surf Index**. The Modified Surf Index (MSI) is a single dimensionless number that provides a relative measure of the conditions likely to be encountered in the surf zone. For the reported or forecast conditions, the MSI provides a guide for judging the feasibility of landing operations for each type of landing craft. However, the MSI is not used for LCAC, RRC, and CRRC craft.

a. Modified Surf Index Calculation. When applied to a known or forecasted surf condition, the modified surf index calculation provides the commander with an objective method of arriving at a safe and reasonable decision with respect to committing landing craft and amphibious vehicles. The Modified Surf Limit (MSL)is the **MAXIMUM** that should be attempted for routine operations. If the Modified Surf Index (MSI) exceeds the MSL for the craft or vehicle, the landing is not feasible without increasing the casualty rate. If the MSI is less than the Modified Surf Limit of the craft, the landing is feasible. The modification tables required to complete the calculations are located in chapter 11 of the COMNAVSURFPAC/COMNAVSURFLANT Instruction 3840.1(series) COMNAVSURFPAC/ COMNAVSURFLANT Joint Surf Manual."

b. LCAC Surf Information. MSI is not applicable to the LCAC. Limiting conditions for operating the LCAC in the surf zone is based on load size and significant breaker height only. Figure IV-6 provides the LCAC limits to be used for planning purposes. Combat Cargo personnel requiring detailed mission planning parameters should consult the LCAC SEAOPS Manual or contact the LCAC Assault Craft Unit Detachment OIC.

LOAD	SIG. BREAKER HEIGHT
75 tons overload	0-4 feet
60 tons normal payload	4-8 feet
45 tons reduced payload	8-12 feet

Figure IV-6, LCAC Planning Limits

c. Surf Limits for Raiding Craft. The MSI are not used for judging the feasibility of conducting CRRC/RRC operations. Rigid Raiding Craft (RRC) operations should only be conducted in relatively benign surf conditions, where the Significant Wave Height is **one foot or less.**

12. **Beach Nomenclature and Characteristics.**

a. Terminology.

(1) The offshore area is that area from the 5-fathom curve seaward.

(2) The inshore area is that area from the 5-fathom curve to the mean low water mark.

(3) The foreshore area is that area from the mean low water mark up to the beginning of the ordinary or summer berm.

(4) The backshore is that area that comprises both ordinary-summer and storm-winter berms.

(5) Coastal terrain is that area from the storm-winter berm inland.

(6) Berm is a nearly horizontal portion of the beach or backshore having an abrupt fall and formed by deposition of material by wave action, marks the limit of ordinary tides.

(7) Scarp is an almost perpendicular slope caused by wave action and erosion along the shoreline.

b. Characteristics.

(1) Submerged section: The trafficability of this area is critical especially during low tide conditions.

(2) Moist section of the tide zone. The trafficability of this area that is kept by the normal wave action on that beach at high tide.

(3) Dry section, including berm and backshore. Soft, hard, etc.

(4) Area in back of beach, dunes, swamps, hills, mangroves, rocks, etc.

13. **Beach and Surf Hydrographics.** The planning and execution of amphibious operations requires combat cargo personnel to understand the effect of surf and hydrographic conditions. Studies of both of these features must be conducted because the surf on a given beach depends not only upon beach exposure, but also upon the underwater topography. Furthermore, the profile of sandy and gravel beaches are constantly altered by wave action. These features can have a profound affect on amphibious operations. The intent of this chapter is to provide the information necessary to understand the beach and surf considerations used in planning and executing an amphibious operation.

a. Waves, Seas, and Swells

(1) Waves are formed by wind, earthquakes, tides, the contour of the sea bottom, and the curve of the shoreline. The following wave terminology highlights the chief characteristics of a wave.

(a) The **crest** is the peak or upper limit of an individual wave.

(b) While the **trough** is the horizontal almost flat area between crests.

(c) **Wave height** is the vertical distance from the crest to the preceding trough.

(d) The **wave length** is defined as the horizontal distance from crest to crest.

(e) The **wave period** is the time it takes a wavelength to pass a given point.

b. Waves and the Shore.

(1) Shallow water modifies and changes a wave, bending the wave front to approximate the shape of underwater contours. This is commonly known as refraction.

(a) The water depth controls the velocity of the wave. Shallow water slows a wave resulting in waves striking nearly parallel to a shore.

(b) The energy of a wave is concentrated in headlands where waves converge. Energy is spread out in bays where the waves are elongated.

(2) Breakers: When the wave moves into water shallower than half the wavelength, the wave height will increase while the wavelength decreases causing breakers. At a water depth of 1.3 times the wave height, the water supply is reduced and the wave breaks.

(a) There are three types of breakers.

1 **Spilling** breakers normally occur on flat, mild and gentle beach gradients or slopes and to a lesser extent on moderate gradients. The crest slides down the face of the wave forming foam, giving a very gradual release of energy over a wide area. This type of breaker is **preferred** for conducting an amphibious operation.

2 **Plunging** breakers occur on steep gradients and to a lesser extent on moderate gradients. The crest plunges over into the preceding trough with a sudden release of energy in a narrow area. This condition is less preferred for conducting an amphibious operation.

3 **Surging** breakers occur on steep gradients. The backwash is very strong because of the steep slope. The wave builds like a plunging breaker but the sudden backwash stops the plunging and the breaker explodes onto the beach.

c. Effects of breakers on landing craft.

(1) **Breaker Height**. High waves can swamp a craft by either plow in of the bow or when the wave breaks on the stern when landing or retracting from the beach.

(2) **Breaker Angle**. Off-angle breakers can make it difficult for craft to remain on course or may result in breaching of the craft once it has landed.

(3) **Breaker Period**. The interval at which the craft encounters breaking waves. Subjected to continuous impact resulting in loosing control of the craft, in drifting from the boat lane or correct beach, broaching.

d. Beach Gradient. The average bottom slope from the offshore area to the inshore area is called the beach gradient of which there are five types. The numbers refer to the rise-to-run ratio of the beach. For example, a steep gradient has a 1-foot rise in level every 15 feet of beach run. A gentle gradient is preferred for amphibious operations. Landing craft as well as LSTs have a keel slope of 1:45. This slope falls right in the middle of the gentle gradient.

(1) Steep - More than 1:15

(2) Moderate - 1:15 to 1:30

(3) Gentle - 1:30 to 1:60

(4) Mild - 1:60 to 1:120

(5) Flat - Less than 1:120

e. Seas. Seas are generated by the wind and travel in the same approximate direction as the wind. Seas are generated within an area called the fetch. Within the fetch, the wind generating the seas has a constant direction and speed. The longer the wind duration and the greater the wind velocity, the greater will be the wave height.

f. Swell Action. Swells are waves that leave the fetch. They do not need local winds to sustain them. The crests of swells become lower and more rounded. Swells move in trains or groups of similar period and height. Seas and swells exist together. They can reinforce (crest meets crest) each other or cancel (crest meets trough) each other.

g. Tides. Combat cargo personnel must be familiar with the three types of tides and other tide related definitions. It is important to note that the majority of the Navy's charts are based on mean low water.

(1) Definitions

(a) **High water**: The high level of a single tide.

(b) **Low water**: The low level of a single tide.

(c) **Mean high water**: The average of high tides.

(d) **Mean low water**: The average of low tides.

(e) **Range**: The vertical distance between high and low tide levels.

(f) **Period**: The time for one complete tide cycle.

(1) Three types of tides.

(a) **Semi-diurnal** (semi-daily) tides found on the East Coast of the United States. They consist of 2 low tides and 2 high tides in a 24-hour period. (high-low-high-low)

(b) **Diurnal** (daily) tides are found in the West Pacific and consist of 1 low tide and 1 high tide in a 24-hour period.

(c) **Mixed tides**, which are low and high tides, that are not divided equally in a 24-hour period by their intensity or have a high tide inequality during a 24-hour period but consistent low tide levels. Tides of this type are found on the West Coast of the United States and Mid Pacific areas.

h. **Sandbars**. These obstacles parallel the majority of sand beaches. In some places they occur only during the season of largest waves, but elsewhere they persist throughout the year. Longitudinally the bars may be continuous for miles, but are likely to be discontinuous, being developed off some portions of a beach and not off others. The breaks in the bars can be detected from the air from the breaker pattern.

(1) In some very sandy areas a series of bars extends for miles out to sea and the outer ones attain depths far too great to interfere with amphibious operations. However, the typical depth of the longshore bar ranges from about 3 to 15 feet below mean low water.

(2) These offshore bars, particularly the shallower ones, are a serious menace to landings. Landing craft are often "hung" on the crest of the bars and a considerable time interval may elapse before they are able to cross.

i. **Reefs, Shoals and Currents.** These environmental conditions can also have a dramatic affect on a waterborne amphibious landing. The following subparagraphs define each of these potential obstacles and clearly highlight their importance to amphibious planners.

(1) **Fringing Reefs**. Fringing reefs are coral reefs attached to the land. The width may wary from a few feet to more than a mile. An inshore channel may be present on fringing reefs.

(2) **Barrier Reefs**. Barrier reefs lie offshore and are separated from the land by a body of water called the lagoon. If the ship or landing craft operating areas can be established inside the reef, more stable sea conditions and anchorage’s will be assured.

(3) **Shoals**. Uplifting seabed earthquakes form rock reefs. This may expose a rocky ledge or ridge offshore.

(4) **Offshore currents** are found outside the surf zone. These currents are related to the distribution of density in the ocean and the effect of the winds. Examples are the Gulf Stream off the American East

Coast and the Kuroshio off the coast of Japan. Currents of this type are constant for long periods, although they may vary in velocity and direction at different seasons of the year.

(5) **Longshore currents** are found within the surf zone. Longshore or littoral currents flow parallel to the shoreline inside the breakers and are most commonly found along straight beaches. They are caused by waves breaking at an angle with the beach. Their velocity increases with increasing breaker height, with increasing angle of the breaker with the beach, and with steeper beach slopes. (Note: A breaker arriving parallel to the beach has an angle of 0 degrees to the beach.) The longshore currents are predictable but the accuracy of the forecast will depend upon the accuracy of the wave forecast on which it is based.

(6) **Rip currents** are caused by the waves piling water against the coast. This water flows along shore until it is deflected seaward by bottom irregularities, or until it meets another current and flows out through the breakers. Once feeder and rip currents have formed, they cut troughs in the sand and remain fairly constant in position until the wave conditions change.

j. **Land fast ice** creates several problems such as:

(1) The ability of landing craft to properly beach, lower their ramps, discharge their cargo while holding their position.

(2) The inability of landing force troops to cross the ice quickly and safely.

(3) Ice near the shore is likely to collapse under the weight of vehicles and support equipment.

k. **Landing Craft Casualties.** A casualty is defined as any mishap by which a craft is put out of operation; either temporarily or permanently.

(1) **Swamping** is caused by surf conditions spilling a large amount of water into a landing craft.

(2) **Hanging** is when a landing craft is grounded on a sandbar, reef or shoal.

(3) **Broaching** is when a beached landing craft is forced parallel to the beach (and further grounded) by surf action. This is the most dangerous of all landing craft casualties.

(4) **Plow-in** is when the forward skirt of the LCAC collapses inward causing excessive yawing.

14. **Salvage Operations.** The mission of the salvage organization is to keep all boat lanes and beachheads clear of disabled assault craft so that movement to the beach is maintained. This mission is performed by the following organizations.

a. The BGC is responsible for all salvage operations from the beach to the LOD during the initial assault. After the initial assault, the BGC becomes a traffic control officer and is relieved of all salvage duties by the Beachmaster Unit.
they take charge of all salvage operations from the water line to the 3 fathoms mark and assume the duties

b. Once the Beachmaster Unit is established ashore, of senior salvage officer.

c. The ABGC takes charge of all salvage operations from the LOD to the rendezvous area during the initial assault. After the departure of the last scheduled wave from the rendezvous area, the ABGC becomes the senior salvage officer afloat and reports to the Beachmaster Unit.

d. Salvage Boat assets are defined as being either heavy or light. The heavy salvage boat assets consist of LCM-8, LARC or the AAVR. Heavy salvage boat assets follow the scheduled waves to the beach and remain in the vicinity of the beach. The light salvage boat assets consist of the LCPL.

APPENDIX A

COMNAVSURFLANT AMPHIBIOUS FORCE CAPABILITIES/CAPACITIES

SHIP	LANDING FORCE *SURGE				SQFT	CUFT	LCAC	LCU	REMARKS (SQFT)		
	FLAG	OFF	SNCO	ENL							
WASP LHD-1	1	173 *19	64 *6	1,449 *161	24,012	144,948	3	2	WD=18,490 LV=9,038	HD=20,698	UV=14,974 FD=90,737
KEARSARGE LHD-3	1	173 *19	64 *6	1,443 *167	26,558	137,225	3	2	WD=14,270 LV=9,038	HD=20,698	UV=14,947 FD=82,392
BATAAN LHD-5	1	173 *18	64 *6	1,449	29,203	149,293	3	2	WD=16,142 LV=9,829	HD=19,547	UV=16,374 FD=91,386
SAIPAN LHA-2	1	172	63	1,672	36,163	142,215	1	4	WD=18,565 LV=9,829	HD=18,519	UV=17,636 FD=75,183
NASSAU LHA-4	1	172	59	1,672	58,024	208,431	1	4	WD=18,565 LV=6,309	HD=18,519	UV=17,636 FD=73,856
AUSTIN LPD-4	NA	68	21	638 *188	14,848	53,647	1	1	WD=7,398 LV=8,817	HD=NA	UV=6960 FD=13,754
SHREVEPORT LPD-12	1	79	26	540 ***168**	16,380	47,445	1	1	WD=8,036 LV=9,037	HD=3,543	UV=7,343 FD=13,809
NASHVILLE LPD-13	NA	79	26	549 *200	17,352	62,836	0	1	WD=8,036 LV=9,052	HD=NA	UV=8300 FD=15,000
TRENTON LPD-14	NA	71	21	609 *176	17,773	56,555	0	1	WD=8,528 LV=9,037	HD=NA	UV=7,556 FD=13,754
PONCE LPD-15	NA	71	21	636 *192	15,824	48,960	1	1	WD=7,885 LV=8,732	HD=1,217	UV=7,452 FD=13,850
PORTLAND LSD-37	NA	26	8	242 *64	8,333	69,054	3	2	WD=21,000	HD=NA	FD=4,680
WHIDBEY ISLAND LSD-41	NA	25 *7	12 *6	362 *87	21,619	6,743	4/5	3	WD=21,616 VEH=18,451	HD=NA	FD=7,935
GUNSTON HALL LSD-44	NA	27 *7	18 *6	360 *88	18,451	6,665	4	3	WD=21,619 VEH=18,451	HD=NA	FD=9,356
TORTUGA LSD-46	NA	28 *7	18 *7	362 *88	19,067	6,651	4	3	WD=21,619 VEH=19,067	HD=NA	FD=8,444
ASHLAND LSD-48	NA	27 *7	14 *7	362 *88	19,349	6,727	4/5	3	WD=21,619 VEH=19,067	HD=NA	FD=8,444
CARTER HALL LSD-50	NA	25 *7	18 *6	362 *88	26,917	80,816	2	1	WD=9,040 VTA=2,227	TT=1,184 VSA=12,336	BD=3,615 FD=7925
OAKHILL LSD-51	NA	25 *7	18 *6	362 *88	16,003	66,535	2	1	WD=8,592 VTA=1,565	TT=1,184 VSA=8,975	BD=3,615 FD=7,808

TOTALS EQUATE TO MAXIMUM STOWAGE CAPABILITY OF ALL AREAS. REFER TO INDIVIDUAL SHIPS CHARACTERISTIC PAMPHLET (SLCP) FOR SPECIFIC RESTRICTIONS/REDUCTIONS IN CAPABILITY.

WD=WELL DECK UV=UPPER VEH DECK FD=FLIGHT DECK MD=MEZZANINE DECK (LSD)
HD=HANGER DECK LV=LOWER VEH DECK TT=TRUCK TUNNEL VSA=VEHICLE STOWAGE AREA (LSD CV)
MAIN DECK (LST) BD=BOAT DECK

COMNAVSURFPAC AMPHIBIOUS FORCE CAPABILITIES/CAPACITIES

SHIP	LANDING FORCE *SURGE				SQFT	CUFT	LCAC	LCU	REMARKS (SQFT)		
	FLAG	OFF	SNCO	ENL							
ESSEX LHD-2	1	171 *19	64 *6	1,392 *157	25,212	144,948	3	2	WD=18,490 LV=9,038	HD=20,698	UV=16,174 FD=90,737
BOXER LHD-4	1	171 *19	64 *6	1,392 *157	25,212	144,948	3	2	WD=18,490 LV=9,038	HD=20,698	UV=16,174 FD=90,737
BON HOMME RICHARD LHD-6	1	171 *19	64 *6	1,392 *157	25,212	144,948	3	2	WD=18,490 LV=9,038	HD=20,698	UV=16,174 FD=90,737
TARAWA LHA-1	1	171	59	1,672	24,891	158,827	1	4	WD=16,856 LVF=5,003	HD=20,866 LVA=4,159	UV=17,941 FD=75,185
BELLEAU WOOD LHA-3	1	171	59	1,672	23,120	116,111	1	4	WD=16,856 LVF=3,640	HD=20,866 LVA=1,536	UV=17,941 FD=75,185
PELELIU LHA-5	1	171	59	1,672	24,891	158,827	1	4	WD=16,856 LVF=5,003	HD=20,866 LVA=4,159	UV=17,941 FD=75,185
OGDEN LPD-5	0	73	21	630 *202	14,083	51,174	1	1	WD=7,900 LV=6,955		UV=7,128 FD=15,088
DULUTH LPD-6	0	73	21	630 *202	14,083	51,188	1	1	WD=7,900 LV=6,955		UV=7,128 FD=15,088
CLEVELAND LPD-7	1	78	26	555 *178	14,102	51,188	1	1	WD=7,062 LV=7,375		UV=6,727 FD=14,793
DUBUQUE LPD-8	1	79	26	569 *186	13,858	56,553	1	1	WD=7,084 LV=7,947		UV=5,911 FD=14,861
DENVER LPD-9	1	78	26	584 *170	12,329	56,845	1	1	WD=8,012 LV=6,497		UV=5,832 FD=14,861
JUNEAU LPD-10	1	79	26	576 *178	13,876	48,783	1	1	WD=7,084 LV=7,327		UV=6,549 FD=13,252
ANCHORAGE LSD-36	0	25	8	301	17,712 NOTE-1	2,753 NOTE-2	3/4	2/3	WD=20,224 (NOTE-1)	MD=6,880 SD=2,283	FD=5,664
MOUNT VERNON LSD-39	0	25	8	266 *58	16,572 NOTE-1	2,036 NOTE-2	3/4	2/3	WD=20,724 (NOTE-1)	MD=5,740 SD=2,832	FD=5,664
GERMAN TOWN LSD-42	0	27 *7	14 *6	362 *88	19,067 NOTE 3/5	6,727	4	3	WD=21,619 (NOTE-3)		VS=19,067 FD=17,800
FORT MCHENRY LSD-43	0	27 *7	14 *6	362 *88	19,067 NOTE 3/5	6,727	4	3	WD=21,619 (NOTE-3)		VS=19,067 FD=17,800
COMSTOCK LSD-45	0	27 *7	14 *6	362 *88	19,067 NOTE 3/5	6,727	4	3	WD=21,619 (NOTE-3)		VS=19,067 FD=17,800
RUSHMORE LSD-47	0	27 *7	14 *6	362 *88	19,067 NOTE 3/5	6,727	4	3	WD=21,619 (NOTE-3)		VS=19,067 FD=17,800
HARPERS FERRY LSD-49	0				14,127 NOTE-1	50,777 NOTE-4	2	2	WD=		VS=14,127 FD=17,800
PEARL HARBOR LSD-52	NA	25 *7	18 *6	362 *88	16,003	66,535	2	1	WD=8,592 VTA=1,565	TT=1,184 VSA=8,975	BD=3,615 FD=7,808
FREDERICK LST-1184	NA	18	18	246 *48	16,609	4,361			TD=8,880 MD=7,729		VEH=16,609 FD=2610

TOTALS EQUATE TO MAXIMUM STOWAGE CAPABILITY OF ALL STOWAGE AREAS, REFER TO SLCP FOR SPECIFIC RESTRICTIONS/REDUCTIONS IN CAPABILITY.

NOTES:

1. APPROX 8,000 SQFT AVAILABLE IN WELL DECK UNDER MEZZANINE DECK, FIGURE INCLUDED IN TOTAL.
2. WITH/WITHOUT MEZZANINE DECK INSTALLED.
3. APPROX 3,500 SQFT AVAILABLE IN WELL DECK FORWARD OF LANDING CRAFT, FIGURE INCLUDED IN TOTAL.
4. WEIGHT RESTRICTION MAY PRECLUDE STOWAGE OF TOTAL CUFT CAPABILITY. SHIPALT MAY REDUCE TOTAL CUFT CAPABILITY, BUT WILL INCREASE TOTAL SQFT CAPABILITY.
5. 2-SPOT FLIGHT DECK HAS A SQFT OF 17,800 SQFT. FWD SPOT (8,444 SQFT) IS INCLUDED IN THE VEHICLE SQFT CAP.

WD=WELL DECK UV=UPPER VEHICLE FD=FLIGHT DECK LVF=LOWER VEHICLE FORWARD HD=HANGER DECK
LV=LOWER VEHICLE LVA=LOWER VEHICLE AFT TD=TANK DECK MD=MEZZANINE DECK (LSD), MAIN DECK (LST)

APPENDIX B

GLOSSARY

Life aboard ship will require you to develop a completely new vocabulary; even new terms for many commonplace items. There are many individual reasons for this, but most of them boil down to convenience and safety. Under certain circumstances, a word or a few words mean an exact thing or a certain sequence of actions, thus making it unnecessary to repeat a list of orders or to give a lot of explanatory details.

This glossary is printed here for your convenience. It is not all encompassing nor intended to be extensive (you will notice the absence of the most common words), but it does contain many orders and terms the meanings of which shipboard personnel should understand.

ABAFT THE BEAM - Any direction between the beam and the stern.

ABEAM - Bearing 90 degrees or 270 degrees relative from own ship.

ABOARD - Within or on the ship. The sailor's term; non-deployers use "onboard."

ADRIFT - Loose; not secured to a stationary object.

AGROUND - When any part of a vessel is resting on the bottom. A ship runs aground or goes aground.

ALOFT - Above the decks. On the mast or in the rigging.

ANCHOR AT SHORT STAY - The anchor chain is out at a minimum length with the anchor still holding.

ANCHOR BALL - A black, circular shape hoisted to indicate the ship is anchored.

ANCHOR BUOY - A small float attached to the anchor by a line, to mark the anchor's location if the chain is slipped or parted.

ANCHOR IN SIGHT - A report made by the anchor detail to the bridge when the anchor is first sighted when bringing it in.

ANCHOR IS CLEAR - When the anchor is first clear of the water and there is nothing fouling it or on it.

ANCHOR IS FOULED - The anchor has picked up a cable, debris, rock or coral, or is wrapped in its own chain.

ANCHOR IS SHOD - The anchor is covered with mud or bottom.

ANCHOR'S AWEIGH - The anchor has lifted clear of the bottom.

ANNUAL VARIATION - A change in Earth's magnetic lines of force, varying in different localities.

ARM - That part of an anchor located between the crown and the fluke. Upright or nearly upright strength member of a davit. The act of plastering tallow into a recess in the bottom of a sounding lead; this is called arming the lead and is done for the purpose of bringing up a specimen of the bottom.

ATHWART THE HAWSE - Across the stem.

ATHWARTSHIPS - Anything that extends from one side to the other, such as an athwartships passageway.

AVAST - Stop; cease; as in A vast heaving.

BACKING AND FILLING - The act of a sailing craft repeatedly catching and losing the wind from its sails so as to be unable to make headway. Extended to cover the "fits and starts" of a person who cannot make up his or her mind. Also the backing and going ahead of a ship in casting or turning in confined waters.

BACKSTAY - Piece of standing rigging leading aft.

BACK TO BATTERY - Return of a gun after recoil to firing position.

BARGE - A boat assigned for the personal use of a flag officer. Also a vessel that carries liquids, munitions, or cargo, which is usually towed.

BATTEN - Long strip of wood or steel wedged against the edges of hatch tarpaulins to secure them. Strips of light wood inserted in the leech of a sail to prevent the leech from curling. Long, removable wooden or steel members extending from the deck to the overhead, used in storerooms to keep equipment and stores from shifting. In cargo holds, long planks along the ship's sides that protect cargo from rust and sweat.

BATTEN DOWN - The act of making a hatch watertight by wedging the battens against the tarpaulins, or of wedging shut or dogging down any watertight opening.

BEAM - The overall width of a vessel.

BEAM ENDS - A vessel lying on its side is said to be on its beam ends. Often used to indicate that a vessel has taken an unusually large roll and was almost on its side.

BECKET - The fitting on a block to which the dead end of the fall is attached.

BELAY - The act of securing a line to a cleat, set of bits, or any other fixed point. In connection with an order or announcement, expresses the idea to disregard, as in "Belay that last order".

BETWIXT WIND AND WATER - That portion of the vessel along the water line which, when the vessel rolls, is ultimately above and below water.

BIGHT - A loop of rope, line, or chain.

BLOCK - Device consisting of a pulley encased in a shell of wood or metal, through which a line or wire rope can run freely. A snatch block is one in which the shell opens by means of a hinged strap to take a line or wire.

BOAT BOOM - A spar swung out from a ship's side from which boats can be secured.

BOAT FALLS - The rig used to hoist or lower small boats.

BOLLARD - Strong cylindrical upright on a pier, around which the eye or bight of a ship's mooring line is placed.

BOLTROPE - Line sewed around the edge of a sail, awning, or other canvas.

BREAKER - A long, broken sea rolling in on a beach.

BREAKER LINE - The outermost boundary of a breaker area; also called the surf line.

BREAKOFF - When walking away with a line or running in a line, to let go, return to the point from which the line is being hauled, take a new hold, and walk or run away again. (See WALKAWAY and RUN AWAY.)

BREAST LINE - A mooring line from the ship to the pier, holding the ship in to the pier.

BREECH - Portion of a gun through which projectiles and powder are passed when the gun is being loaded.

BREECH BLOCK - Device that closes the firing chamber of a gun after loading.

BROACH - The act of breaking through the surface and jumping out of the water. Sometimes called porpoising.

BROACH TO - The action of a vessel being thrown broadside to the course by some force acting on the stern. A boat thrown broadside on the beach is said to be broached to, or simply broached.

BULL ROPE - Wire used in cargo handling in connection with the topping lift. Also used as the term for the wire from a towing machine.

BULL'S-EYE - A round piece of lignum vitae, with a hole in the center and scored around the edges to take the eye of a line. Frequently used in guesswarps. . Also the nickname for a compartment identification stencil.

BULWARK - Solid fence like barrier along the edges of weather decks.

CALIBER - Diameter of a gun's bore in inches: A 3"/50 gun is 3" in bore diameter and 50 caliber's (150") long.

CANTILEVER - A projecting beam supported only at one end.

CAPSTAN - A vertical shaft machine used for handling lines or wires on its drum.

CARRY AWAY - The act of breaking loose.

CARRY RUDDER - When a vessel requires a constant amount of rudder on one side to maintain a steady course, it is said to be carrying rudder.

CASTING - The act of turning a ship through 360 degrees without appreciably changing its position; done by alternately backing and going ahead on its engines and repeatedly shifting the rudder.

CAULK - To make a joint watertight.

CHAIN PIPE - Pipe leading from the forecastle deck to the chain locker.

CHECK - Expresses the general idea to slow. To check a line running out under a strain means to allow only enough of it to render around the bits to prevent the line from parting.

CHOCK-A-BLOCK - Full; filled to the extreme limit.

CLEAR FOR ACTION - Prepare a ship for (battle stations). Remove items like jackstaffs, stow loose gear, open ready service ammunition boxes, etc.

CLEAR FOR RUNNING - Ready to run out without fouling.

CLEAT - A device for belaying a line or wire, consisting essentially of a pair of projecting horns.

CLOSE UP - The act of hoisting a flag to, or in, its highest position.

COCKLE - Kink in an inner yarn of rope, forcing the yarn to the surface.

COLLAR - Metal ring that steadies the base of a mast, or supports the upper end of a boom that is stowed upright.

COMBAT LOADING - Loading a ship in reverse order of items so the last items into the hold will be the first items needed in the amphibious operation.

CONSTANT TENSION WINCH - A winch that keeps a set constant tension on a wire by automatically paying out and recovering slack.

CONTROL VESSEL - The ship that guides and directs the ship-to-shore movement in an amphibious landing. In underway replenishment this vessel sets the replenishment course and speed and is the guide.

COXCOMBING - Fancy knot work worked around rails, handles, or stanchions. It also provides a secure grip.

CRES - Corrosion-resistant stainless steel.

CROSS POINTING - Also known as coach whipping. Line, canvas, or leather braided around stanchions for decoration and protection.

CROWN - Rounded part of an anchor below the shank. A knot in the end of a line made by interlacing the strands.

D-DAY – The unnamed day on which a particular operation commences or is to commence.

DAY BEACON - Unlighted structure that serves as a daytime aid to navigation.

DAYMARK - The identifying characteristics of a day beacon. Also, the shapes or signals displayed by a vessel to indicate a special purpose, such as fishing, laying cable, and dredging.

DEAD RECKONING - Determining position by direction and distance traveled from a known position.

DECK LOAD - Cargo stowed on the weather docks.

DEEP SIX - Throw an article overboard.

DEVIATION - Magnetic compass error caused by the magnetic properties of a vessel. It is expressed in degrees east or west.

DINGHY - A square-sterned pulling boat that can be rigged for sail.

DIP THE EYE - To arrange the eyes of mooring lines on bits or bollards so one line dips into the eye of the other so that either line may be removed without disturbing the other.

DOCK - The water space between adjacent piers, or the space in a dry-dock.

DOCKING KEEL - Keel like projection between the main keel and the turn of the bilge; used to support the ship on blocks in a dry-dock.

DODGER - Wood, metal, or canvas upward extension of the forward bulwark on a bridge; serves as a wind breaker.

DOG WATCH - One of the two 2-hour watches in a dogged (split) 1600 to 2000 watch.

DOLPHIN - A piling or a nest of piles off a pier or beach or off the entrance to a dock used for mooring.

DOUSE - To lower quickly, as a sail. To put out quickly, as a fire or cigarette.

DOWN BY THE HEAD (properly, BY THE HEAD) - Said of a vessel when its draft forward is deeper than its draft aft.

DOWN BY THE STERN (properly, BY THE STERN) - Said of a vessel when its draft aft is deeper than its draft forward.

DOWNHAUL - Any line, wire, or tackle that applies a downward pull. Usually paired with a halyard.

DRAFT - The vertical distance from keel to water line.

DROGUE - A sea anchor.

DRUM HOOKS - A sling containing a pair of movable hooks; used for hoisting a drum, cask, or barrel by its chines. Also called chine hooks.

DUNNAGE - Any material used to separate layers of cargo, create space for cargo ventilation, or insulate cargo against chafing. Usually refers, however, to cheap wood boarding used for those purposes.

E-DAY – Embarkation Day; the day landing force personnel, supplies, and equipment embark amphibious shipping.

EASE - Relax the strain.

EBB - That period when the tidal current is flowing from the land.

ELDRIDGE METHOD - Method of mooring with two anchors in which one anchor's chain is dipped through the other's hawsepipe before either anchor is let go.

FAIRLEAD - A fitting, such as a block, that provides friction-free passage for a line or cable. Also, a clear route for a line or cable.

FAKE - The act of disposing a line, wire, or chain by laying it out in long, flat bights laid one alongside the other. One of the bights.

FALL OFF - Said of a ship or boat when it drifts away from a desired position or direction.

FANCY WORK - Decorative knots, and pieces of canvas and leather fashioned in patterns or lace. Examples of this work are curtains or mats in an admiral's barges, captain's gigs, and/or quarterdecks.

FIFE RAIL - Rail containing belaying pins.

FISHHOOK - A broken end of wire protruding from a wire rope.

FLASH PLATE - Line of plates between the anchor windlass and the chain pipes and hawespipes, over which the anchor cable runs.

FLEMISH - Method of disposing a line by coiling it tightly flat on deck with the second coil inside the first, and so on.

FLOOD - That period when a tidal current is flowing landward.

FLOTSAM - General term for articles that will float if jettisoned. Floating debris left on the surface by a sunken ship.

FLUKES - Broad arms or palms of an anchor. The part of the anchor that digs into the bottom.

FOOT ROPE - Line by means of which the foot of a hammock is secured to a billet hook. The lowermost line of a set of lifelines (also called footline). The line hanging in a bight beneath a yard, bowsprit, or jib boom.

FORECASTLE – Also called **Foc'sle**. The section of a ship's upper deck situated at the bow forward of the foremast or a superstructure at the bow of a merchant ship where the crew is housed. Easily identified on Navy ships since the anchor capstans and controls are located on the foc'sle.

FOREFOOT - The part of the keel that curves up to meet the stem, or where the stem joins the keel of the ship.

FORESTAY - Piece of standing rigging leading forward.

FOUL ANCHOR - Anchor with chain wrapped about a fluke or the stock, or with some other encumbrance entangled about it.

FOUNDER - To sink as a result of filling or flooding.

FOUR-IN-HAND - The act of preventing a tackle from overhauling by gripping in both hands the parts of the fall between the blocks.

FREEBOARD - That portion of a vessel between the water line and the main deck.

FRESHEN THE NIP - To set up again. To veer on a cable or pull up on a backstay to shift the chafe from a particular spot.

FULCRUM - A prop or support. The point about which a lever tums.

FURL - To roll up snugly and secure, as a sail or awning.

GANGWAY - An opening in the rail or bulwark giving access to the ship.

GANTLINE - Line used as a single whip for hoisting or lowering a boatswain's chair or one end of a stage.

GATE - That part of a collar that opens on a hinge.

GOOSENECK - Universal joint at the heel of a boom that allows the boom to be swung in any direction. Method used by a nozzleman to bend a firehose in such a way that the hose does not kink and the stream of water can be directed to otherwise inaccessible spots, such as inside doors or under floor plates.

GROMMET - A reinforced hole in a sail or awning. A grommet can be fashioned with line or made of metal.

GUDGEONS - Eyes set in the stern or the rudder post to receive the pintles of the rudder.

GUY - Any line, wire, or tackle that provides -athwartships support or motion for a boom head or the head of a gin pole. (See SHROUD.)

GYPSY (GYPSY HEAD) - Cylindrical device at the end of the shaft on a winch or horizontal shaft windlass, on which the turns of a line or wire are taken for heaving.

H-HOUR – The specific hour on D-Day at which a particular operation commences.

HAND-OVER-HAND - Expresses the idea one hand after the other, as when a line is hauled in rapidly by hand or when a person climbs a line without using the legs and feet.

HANDSOMELY - Slowly; deliberately; carefully.

HATCH BOOM - Cargo boom plumbed over the cargo hatch. (Yard-and-stay rig.)

HAULING PART - That part of a fall to which power is applied.

HAUL OUT - Order given to a boat coxswain to take the boat from the ship's side and secure it at the boat boom.

HAWSER - Any line over 5 inches in diameter.

HEAD - The stem. The upper end of a lower mast, boom, or gin pole. The upper edge of a four-sided fore-and-aft sail. A compartment containing toilette facilities.

HEAD LINE - A mooring line or hawser that is made fast forward of a ship's pivot point, such as a tug passing a head line when working a ship or tow.

HEAVE - To throw, as to heave the lead or a heaving line. To haul in, especially by some powered heaving engine.

HEAVE RIGHT UP - Order given to heave the anchor up into the hawse. May be given as "Heave right in."

HEAVE AROUND - Haul in on a line, wire, or chain by means of a powered heaving engine. The call, on a boatswain's pipe, that is the signal to start heaving around.

HEAVE SHORT - The act of heaving in the cable until the anchor is at short stay. The order usually is given as "Heave round to short stay."

HEAVE TO - The act of stopping the headway of a vessel or of reducing headway to just enough to maintain steerage way.

HITCH - A knot used to bend the end of a line to a ring or to a
cylindrical object is usually, but not always, designated as some form of hitch.

HOGGING LINE - Line temporarily used to hold a stage or other object close to the side of the ship.

HOIST - To move an article vertically upward by means of some hoisting rig.

HOIST AWAY - Go right on hoisting until stopped by another order.

HOIST IN - Hoist an object to a required height and swing it in.

HOIST OUT - Swing out and lower away.

HORSE LATITUDES - Either of two belts or regions about 30 degrees N or 30 degrees S latitude, characterized by high pressure, calms, and light baffling winds. Thought to be so named because, in the days of sailing vessels, many ships lost all or part of their cargos of horses while becalmed in those areas.

HOUSE - Heave an anchor into the hawsepipe.

HOUSING LINE - See LIFELINE.

HULL DOWN - Said of a vessel when, because of distance and the curvature of the Earth, only the superstructure is visible.

INBOARD LIFELINES - Temporary lifelines erected inboard of the permanent lifelines during heavy weather

INHAUL - In general, a line used to recover any piece of gear, such as a paravane or a trolley block. When replenishing at sea, the vessel providing the gear retains the inhaul and sends the "out haul" to the other ship.

IN STEP - Said of a towing vessel and its tow when both meet and ride over seas at the same time.

IRISH PENNANT - A loose end of line carelessly left dangling.

IRON MIKE - Term applied to a gyroscopic robot steering mechanism.

JACKSTAFF - Upright spar at the stem to which the jack is hoisted.

JACKSTAY - Horizontal support to which articles such as seabags, tackles, coils of line, etc., can be lashed.

JIGGER - Light luff tackle for general use about the deck.

JUMBO BOOM - Regularly installed heavy duty swing derrick for handling extra-heavy lifts.

JUMPING ON A LINE - The act of trying to start a stranded vessel with a sudden pull on the tow line. Slack is provided in the tow line, and the assisting vessel runs ahead under full power, fetching up short when the slack is taken out.

JURY RIG - Any makeshift device or apparatus rigged as a substitute for gear regularly designed for the desired purpose. The act of setting up a jury rig.

KEDGE - A way in which an anchor is carried out by a ship's boats and is dropped, then the ship hauls itself to the anchor.

KEEL - The lowermost, central strength member of a ship that runs fore and aft and from which the frames and the plating rise.

KEEL BLOCK - One of a line of blocks along a dry-dock bed; used to support the keel or docking keel of a vessel in dry-dock.

KEEL STOP - Marker on a boat's keel that indicates its proper fore-and-aft placement for lowering into the chocks.

KING POST - One of a pair of short, strong uprights used to support twin cargo booms on some cargo vessels. Short, strong upright supporting the boom of a crane.

KNIFE EDGE - The trim of a door frame, hatch, or port that meets the gasket for a watertight fit.

KNOCK OFF - Expresses the idea to cease or to desist.

L-HOUR - The specific hour on C-Day at which a deployment operation commences or is to commence.

LABEL PLATE - Plate in a boat that contains, among other data, the maximum number of personnel the boat may carry under good weather conditions.

LABOR - The act of a vessel in plunging an ducking heavily in a seaway.

LANDFALL - First sight of land after a voyage.

LANYARD - Any short line used as a handle or as a means for operating some piece of equipment, such as a firing lanyard on a gun. Also, any line used to attach an article of equipment to the person, such as a knife lanyard, pistol lanyard, or a call (boatswain's pipe) lanyard.

LASH - To secure by turns of line, wire, or chain.

LASH-UP - Term applied to a rig, device, or system. Usually uncomplimentary, as in "What kind of a lash-up is that?"

LATITUDE - Distance north (N) or south (S) of the Equator, expressed in degrees and minutes.

LAY - Expresses the idea to move oneself, as in "Lay (yourself) up on the main deck," or "Lay (yourself) aft." As a noun, lay refers to the direction of twist of strands in a line or wire, as in right lay or left lay. EE-Sheltered area to leeward (pronounced loo-ward) of a ship or other large wind breaker. As an adjective, lee expresses the idea in the direction toward which the wind is blowing.

LEFT-HANDED - Counterclockwise. Extended to mean not the right way or backwards.

LEFT-LAID - Refers to line or wire in which the strands spiral along in a counterclockwise direction as one looks along the line.

LEG - One of the two or more sections in a span or bridle, boat sling, set of beam hooks, or similar hoisting attachment. One of the sides of a triangle.

LIE OFF - Heave to at some distance away.

LIFELINE - In general, the lines erected around the edges of decks. Specifically, the top line. From top to bottom, the lines are named lifeline, housing line, and foot rope.

LIFT - Standing rigging supporting a yard. Term applied to any load to be hoisted.

LIMBER HOLE - Fore-and-aft hole through the frames in a boat's bilges, permitting water to flow toward the bilge pump suction point.

LINE - In general, sailors refer to fiber rope as line; wire rope is referred to as rope, wire rope or just wire. More exactly, line refers to a piece of rope, either fiber or wire, that is in use or has been cut for a specific purpose, such as a lifeline, heaving line, or lead line.

LIZARD - A piece of rope with a thimble or bull's-eye spliced into the end and used as a fairlead. The line used to retrieve the end of a sea painter and lines used to lash objects to the side of a ship (such as the lower accommodation ladder platform).

LONGITUDE - Distance east (E) or west (W) of the prime meridian, which runs through Greenwich, England.

LONGITUDINALLY - Fore-and-aft strength members, running the entire length of the ship, which serve to stiffen and strengthen the frames.

LOOK ALIVE - Admonishment to be alert or move faster.

LOOM - The glow made in the sky by a light that has not yet risen above the horizon. The shaft of an oar.

LOWER AWAY - Lower right on down. For example, to lower away a boat from the davit heads down into the water.

LUFF ON LUFF - Combined purchases consisting of a luff tackle with another lull tackle clapped on its hauling part.

LUFF TACKLE - Purchase containing one single and one double block.

MANHELPER - A wooden handle, which is used with a paint roller or with a paint brush lashed to it.
MANROPE - A safety line made up with a series of overhand or figure-eight knots evenly spaced to assist personnel climbing up or down.

MARLINE - Two-strand, left-laid tarred hemp small stuff.

MARRY - To bring two ropes together, either side by side or end to and, and holding or seizing them.

MAST TABLE - Refers to a small compartment or locker on the main deck, built around the base of one of the masts.

MEAN HIGH WATER - In regard to tide, the average height of high water measured over a period of time.

MEAN LOW WATER - In regards to tide, the average height of low water measured over a period of time.
MEAN SEA LEVEL - The level midway between mean high and mean low water.

MECHANICAL ADVANTAGE - The number of times (excluding loss due to friction) that the applied power is multiplied by a purchase or other machine.

MEET HER - Check the swing of a vessel by putting on opposite rudder.

MERCURIAL BAROMETER - Barometer that indicates atmospheric pressure by the height of a column of mercury.

MIDSHIP GUY - Guy between boom heads in a yard-and-stay rig. Also called a schooner guy or lazy guy.

MOORING STAPLE - Metal fitting on a ship's side to which a chain may be attached for added security in mooring alongside.

MOUSING - Line fashioned around a hook or shackle to prevent the load from falling off or the shackle pin from being undone.

MOVABLE BLOCK - Block in a purchase that is not a fixed block. Block to which the load is applied.

NAVY ANCHOR - Old-fashioned anchor. Anchor with a stock.

NEAP TIDE - A tide of less than average range, caused by the gravitational forces of the Moon and the Sun opposing each other.

NOTHING TO THE RIGHT (LEFT) - Order given to the helmsman not to allow the ship to come to right (left) of the course because of some danger lying on that side of the course.

OCCULATING LIGHT - A navigational aid in which the period of light is equal to or more than the period of darkness.

OILSKINS - Originally, cotton clothing waterproofed by several coats of linseed oil. Now applied to any wet-weather or waterproof clothing.

ORDINARY MOOR - Method of mooring with anchors in which the upstream anchor is dropped first.

ONBOARD - Word to describe equipment installed aboard a ship, such as onboard computers.

OTC - Officer in tactical command.

OUTER BIGHT LINE - Line sometimes used in the close-in method of fueling. It extends from the receiving ship to the outboard saddle.

OUTHAUL - In general, a line used to haul a piece of gear from a Ship (See INHAUL.)

OVERHAUL - The act of drawing apart the blocks of a tackle. One vessel overtaking another. In fire fighting, to break up and rake over debris caused by the fire, to make sure there are no smoldering embers.

PARBUCKLE - The act of hauling in an object in the bight of a line. One end of the line is fixed and the other end is used as the hauling part. The object acts as a runner, thus the mechanical advantage is 2. (See MECHANICAL ADVANTAGE.)

PARCEL - The act of wrapping a line or splice in strips of canvas or cotton to build up a symmetrical surface for serving.

PATENT ANCHOR - A stockless anchor.

PAULIN - Short for tarpaulin.

PAY - After a seam in a wooden deck or hull is caulked, it is payed by pouring pitch or other caulking compound into the remaining unfilled space.

PAY OUT - Expresses the idea to feed out. Past tense is "payed out."

PELICAN HOOK - A hook used to provide an instantaneous release. It can be opened while under strain by knocking away a locking ring that holds it closed.

PELOROUS - Device for taking bearings; consisting of a movable ring, graduated like a compass card, and a pair of sighting vanes.

PENDANT - A single part of fine or wire used to extend the distance spanned by a purchase. A single part of a line or wire whose purpose is to provide a means for connecting or disconnecting, such as an anchor buoy pendant or a hauling pendant.

PIC - In plaited line, the distance between adjacent crowns.

PIER - A structure, usually built on piles, extending out into the water and providing a means for vessels to moor alongside.

PIER HEAD - The outboard end of a pier.

PIGSTICK - Familiar term for a small staff bent to the truck halyards to which the commission pennant is attached.

PINTLE - A Pin fastened to the rudder that fits into the gudgeon on the stern.

PITCH - Vertical rise and fall of a vessel's bow and stern, caused by a head sea or a following sea.

POSITION BUOY - A towing spar used to mark the location of an object towing astern, as the end of a magnetic sweep cable.

PREVENTER - Any line, wire, or chain whose general purpose is to act as a safeguard if something else-carries away.

PUDDING - A bulky fender attached to a strong back or to the stem or gunwales of a boat.

PURCHASE - A tackle, lever, or device that provides mechanical advantage or power. Also used as an effective hold or position for applying power in moving or heaving around.

PUT AWAY - Expresses the idea to leave by water, as in the boat put away from the ship.

PUT OFF - Same as put away, but usually restricted to putting off from the shore.

PUT OUT - Expresses the idea putting off and heading for sea.

QUARTERDECK - That portion of the weather deck designated by the commanding officer for official ceremonies.

QUAY - A loading and discharging place, usually paralleling the shore. Usual construction consists of a masonry wall in the water.

RANGE - The distance an object is from the observer. A navigational range consists of two markers, some distance apart, located on a known line of true bearing. An area designated for a particular purpose, such as a target range or a degaussing range. In regard to tide, the total rise or fall from low water to high, or vice versa.

RAT GUARD - A hinged metal disk that can be secured to a mooring line to prevent rats from using the line to gain access to the ship.

RATLINE - Three-strand, right-laid, tarred hemp used chiefly nowadays for snaking on destroyer-type vessels.

RAT-TAILED STOPPER - A braided tapering stopper used on boat falls, mooring lines, etc.

REEVE - To pass or thread a rope through a block or hole. Past tense is rove.

RELEASING HOOK - Hook on the lower block of a boat fall, which remains closed as long as there is weight on it but tumbles and rejects the hoisting eye as soon as the weight is taken off. Usually called an automatic releasing hook.

RIG - The act of setting up any device or equipment containing rigging. Extended to cover setting up any device or equipment, as to rig for divine services or movies.

RIGGING - A term for the lines and/or wires that support a ship's masts, stack(s), yards, etc. (called standing rigging), and the lines, wires, and tackles that hoist, lower, and otherwise control the motion of its movable deck gear (called running rigging).

RIGHT-LAID - Refers to line or wire in which the strands spiral along is a clockwise direction as one looks along the line.

RODDLE - That part of a wire rope clip into which the U-bolt is inserted.

ROLLER CHOCK - A chock fitted with one or more rollers to reduce

friction on mooring lines. On minesweepers, such a chock provided for the magnetic sweep cable is called an A-frame.

ROPE YARN SUNDAY - In the days of sailing ships, deck hands often spent Sundays unlaying rope into yarns and making oakum, hence "rope yarn Sunday". Later the term was applied to periods during which sailors were allowed to spend making their personal effects shipshape. Now the term is applied to an otherwise workday that has been granted as a holiday for the purpose of taking care of personal business.

RUN AWAY - Run a line in as fast as possible by taking hold and running down the deck with it. (See WALK AWAY.)

RUNNER - A purchase in which a single block is free to move or "run" in the bight of the line.

RUNNING LIGHT - Any one of the lights required by law to be shown by a vessel underway. Not restricted to the side lights, as many sailors believe.

SAIL AREA - The vertical surface of the hull which the wind exerts force on.

SALLY - The act of the crew running in a body fore and aft or athwartships to create a desired shift in weight. This might be done during an attempt to free a grounded vessel or to time the period of roll for purposes of computing stability factors.

SALVO LATCH - A device to prevent the opening of the breech of a gun until after the gun has been fired.

SAMSOM POST - Same as king post, the single bits in small boats.

SAVE-ALL - Nets suspended under brows and under cargo handling operations between the ship and the pier.

SCHOONER GUY - Same as midship guy.

SCOPE - Expresses the idea the number of fathoms out with regard to an anchor cable or a towing hawser.

SCREW - The propeller of a ship or boat.

SCULL - The act of propelling a boat by manipulating a single oar set in a notch in the stern.

SCUPPER - The waterway along the gunwales. Opening in the side through which waste water from a head or galley is discharged. Extended to mean any type of drain opening.

SCUTTLE - Small openings in hatch covers that allow access through the deck without undogging the hatch. They usually are provided with quick-opening and quick-closing covers. A sliding cover that closes the opening over a certain style of companionway. The act of deliberately sinking a vessel.

SEA ANCHOR - Any device streamed from the bow or stern of a vessel to create a drag for holding its end-on to the sea.

SEA LADDER - Permanent ladder secured to the ship's hull.

SEA PAINTER - A line led well forward on the ship to a boat alongside. The sea painter is secured by passing the line around the inboard cleat on the boat, then laying the eye of the line over the standing part, it is then secured by passing a fid or toggle over the eye and under the standing part of the line.
SEA ROOM - A vessel with sea room is well offshore or has plenty of room in which to maneuver.

SEIZING STUFF - Three-strand, right-hand, rope-laid stuff made in 6, 9, or 12 threads of American hemp.

SERVING - A smooth finish on a line or wire, made by winding on close turns of marline or seizing stuff with a serving mallet.

SET - The direction toward which the resultant of the forces of wind and current is acting - is tending to set the ship, in other words.

SET DOWN - Set to shoreward.

SET TAUT - Take out all the slack. This order is given before "Hoist away."

SET UP - Tighten up. For example, set up on dogs, gripes, turnbuckles, and so on.

SH - Line made from a mixture of sisal and hemp.

SHAKE A LEG - An admonishment to move faster.

SHANK - The shaft of an anchor, to which the flukes are attached.

SHEARS (SHEAR LEGS) - Support used in a hoisting rig, consisting of two spars lashed together at the head and set up so as to resemble an inverted V.

SHELL - Vessel's hull from the keel to the main deck.

SHIP - The act of setting a stowed or detached piece of apparatus in operating position, as to ship a steering oar. A large, seagoing surface vessel having a crew quartered on board and capable of extended independent operation. Also used as in to "ship water."

SHORE - The land in general, but usually refers to that part adjacent to the water. A timber or metal member used as a prop. The act of setting up shores to support or steady an article is called shoring up that article.

SHORT STAY - The situation when the anchor cable has been hove in just short of causing the anchor to break ground.

SHOT - One of the lengths of chain which, when joined together, makes up the anchor cable. A standard shot is 15 fathoms long.

SHROUD - Piece of standing rigging providing athwartship support for a mast.

SIDE LIGHT - One of the colored lights required by law to be shown by a vessel underway. The starboard side light is green and the port side is red.

SIGHT - An accurately timed measurement of the altitude of a celestial body.

SIGHT THE ANCHOR - Heave the anchor up to where it can be seen and then drop it again. This is done to determine if the anchor is clear.

SINGLE UP - Take in the extra parts of doubled-up mooring lines so that only a single part of each line remains on the dock. The act of returning a doubled-up cargo purchase to the status of a single whip.

SISTER HOOKS - Twin hooks in a thimble or on a hinge which, when combined, form an eye.

SLACK - The opposite of taut/loose. Allow a rope or chain to run or feed out.

SLACK AWAY - GO right on slacking.

SLING - A piece of line or wire, whose ends are spliced together and passed around an article to be hoisted. Also, two or more legs spliced into a ring, manufactured to hoist a specific article or type of article, such as boat slings and beam slings.

SLIP - When at anchor, disconnecting the cable or letting the end of the cable run out (slipping the cable). Space between two piers.

SLUSH - The act of applying a protective coating to line or wire. The substance composing the protective coating so applied.

SMALL STUFF - A general term for any fiber line 1 3/4 inches in circumference or less.

SNAKING - Netting stretched between the deck and the housing line or the foot rope to prevent personnel and objects from being washed overboard.

SNATCH BLOCK - A single-sheaved block with a hinged strap that can be opened and the bight of a rope inserted, making it unnecessary to reeve the end of the rope through the block.

SNUB - Check a line, wire, or chain quickly. A ship is snubbed by letting go the anchor, bringing the ship up quickly.

SOUND - Determine the depth of the water. The act of a whale or similar sea creature diving toward the bottom. A body of water between the mainland and a large coastal island.

SOUNDING - A measure of the depth of water.

SOUNDINGS - Water of limited depth, as over the continental shelf; a ship is off-soundings when the hand lead can no longer reach the bottom, and on-soundings when it can.

SPAN - Reach, stretch, or spread between two limits. Also the item that spans the limits, such as a line or bar between davit heads, the cargo whips in a yard-and-stay rig, and the chain in an anchor moor.

SPANNER - Wrench for tightening couplings on a firehose.

SPAR BUOY - Buoy consisting of a floating spar, or a metal shaped like a spar.

SPOT - Locate or place, as in spotting boom heads for yard-and-stay transfer.

SPRING - Go ahead or astern on a spring line to force the bow or stern in or out when mooring or unmooring.

SPRING LAY - A rope in which each strand consists partly of wire and partly of fiber.

SPRING LINE - A mooring line leading forward or aft.

SPRING TIDE - Near the time of full moon and new moon, the gravitational forces of the Moon and the Sun act together, producing tides that are higher and lower than average.

STANDARD RUDDER - The amount of rudder angle required to cause a ship to make a turn within a certain (standard tactical) diameter.

STAND BY - Be prepared to execute an order or a maneuver. Remain in the vicinity, prepared to render assistance. Assume another's duties.

STAND IN (OUT) - Head in (or out) of a harbor.

STANDING PART - That part of a tackle or line that is made fast. The part on which power is applied in the hauling part.

STANDING RIGGING - The ship's permanent rigging to support structures, masts, stacks, etc.

START - To induce motion, as to start a grounded vessel.

STAY - A piece of standing rigging providing support fore and/or aft.

STEADY - Stop the swing.

STEERAGEWAY - Enough headway to provide steering effect. When a vessel no longer answers its rudder, it is said to have lost steerageway.

STEM - The foremost vertical extension of the keel, to which the forward ends of the strokes are attached.

STEM BAND - A metal band attached to the stem of a wooden boat.

STEP - The act of erecting a mast. The socket or other recess that holds the foot of a mast.

STERN FAST - A line used to make a boat fast by the stern.

STERN SHEETS - After passenger space in a boat.

STICK - A familiar tern for mast.

STICK OUT - Pay out, as to pay out the cable on a stern anchor winch.

STOP - One of a series of short lines attached to the edge of an awning, boat cover, etc.; used to lash the edge to a ridge rope, jackstay, or other support.

STOP OFF - The act of attaching a stopper to a line, wire, or chain under a strain to hold the strain temporarily while the rope or chain is being belayed.

STOPPER - A line or chain or a patented device (such as a Carpenter's stopper) used for stopping off a rope or chain.

STOW - The act of packing articles into a storage space, or cargo into a cargo space.

STRAIN - Tension.

STRAP - Usually means a short line or wire having an eye in either end. However, a short piece of small stuff with the ends spliced together is sometimes called a strap. Also, that part of a block to which the hook or shackle is attached.

STREAM - The act of permitting a tow to run out the desired distance or to the end of the towline- Similar act with any towed device, as to stream sweep gear from a minesweeper.

STRIKE - To shorten or douse. To lower.

STRINGER - Long timber between piles at the edge of a pier. Horizontal member attached to the side between frames and serving as a support for the end of a transverse (athwartship) frame.

STRONGBACK - Heavy spar spanning radial davits, against which a ready lifeboat is griped in. Heavy steel clamp bolted across the top of a cargo hatch.

STRUT - Brace supporting the propeller shaft.

STUD - Metal piece in a link of anchor chain that keeps the link from kinking.

SURGE - To slack off a line by allowing it to slip around the object to which it is secured. The act of holding turns of a line on a gypsy in such a manner as to allow the gypsy to rotate without heaving in on the line. Sudden strain on a towing hawser caused by the pitching, sheering, or yawing of the tow and/or the towing vessel. The swell of the sea.

SWING - Progressive change of heading caused by an angle on the rudder or by a ship circling around its anchor.

SWING OUT (IN) - Swing a boat from its stowed position to its lowering position. Reverse procedure for swing in.

TAUT - Under tension; the opposite of slack. A taut ship is one that is in a high state of discipline and efficiency.

TENDER SHIP - A ship that heels over easily when underway.

TIDE - The vertical rise and fall of the ocean level, caused by the gravitational force between Earth and the Moon (and to a lesser extent, between earth and the sun).

TOMMING, TOMMING DOWN - Securing cargo against vertical movement.

TOP HAMPER - General term for a ship's masts, stacks, and other rigging aloft.

TOPPING LIFT - Line, wire, or tackle used to hoist, lower, and support the head of a cargo boom or the outboard end of a sailing boom or boatboom.

TOP UP - Raise a boom to a working angle by means of its topping lift.

TOWING SPAR - A spar or other wooden device towed astern by ships in formation when visibility is poor to assist in station keeping. (See POSITION BUOY.)

TRANSVERSE - Part of the structure of a ship athwartships.

TROUGH - The valley between two waves.

TUMBLE - The act of an automatic releasing hook in opening upon release of the weight.

'TWEEN DECKS - Means BETWEEN decks and refers to cargo spaces located between the main dock and the bottom of the hold.

TWO-BLOCK - Round in a tackle all the way so that the blocks come together. Extended to mean hoist an article to the highest position possible. In relation to signal flags, this term has been replaced by close up.

U-BOLT - A Unshaped bolt with threads on each end. The bolt in a wire rope clip.

UNLAY - Untwist and separate the strands of a rope.

UNMOOR - The act of letting go a mooring buoy, letting go mooring lines or, if a ship is moored with anchors, reconnecting each anchor to its own chain and heaving in the anchors.

UNSHIP - The act of detaching or unrigging any piece of apparatus from its operating position.

UP AND DOWN - The situation where the anchor cable and the shank of the anchor lead up and down and the crown of the anchor still is on the bottom.

UP BEHIND - Slack off quickly and run slack to a belaying point. This order is given when a line or wire has been stopped off or falls have been four-in-handed and the hauling part is to be belayed.

VANG GUY - A vang used to guy a cargo or other boom.

VARIATION - Magnetic compass error caused by the difference between the magnetic pole and the geographic pole and certain local conditions. It is expressed in degrees east or west.

VEER - Allow a line, wire, or chain to run out by its own weight, as to veer cable by slacking the brake on a disconnected windlass.

VERTREP - Vertical replenishment, in which helicopters are used to transfer cargo, personnel, and munitions.

WAIST - The amidships section of the main deck.

WALK AWAY - Haul in a line by taking hold of the line and walking down the deck, rather than by using the hand-overhand method.

WALK BACK - Keeping control of the load, walk toward the belaying point.

WALK OUT - Pay out cable under power.

WARP - Move one end of a vessel broadside by heaving on a line secured on the dock.

WARPING WINCH - Winch on the main deck aft, used to warp in the stern when mooring alongside.

WATERBORNE - Afloat, or in contact with the water's surface.

WEATHER - Expresses the idea the one that is to windward. The act of surviving the onslaught of the elements, as to weather a gale.

WEIGH ANCHOR - Hoist the anchor clear of the bottom. Sometimes used to order meaning to get underway.

WET DOCK - Where the tidal range is great, basins with gates are provided as docking places. The ships enter at high tide and the gates are closed, keeping the water in the basin when the tide ebbs.

WHARF - Same as a pier.

WHELPS - The raised areas on the anchor windlass to engage links of chain.

WILDCAT - The drum of the windlass.

WINDLASS - The machine used to handle the ship's ground tackle. Many times called the wildcat, which is fitted with whelps.
On a horizontal shaft windlass, it is usually fitted with gypsy heads on each side to handle lines.

WIRE DIAMETER - Refers to the diameter of a chain measured at the end of a link a little above the centerline.

WISHBONE - A V-shaped brace that supports the upper platform of an accommodation ladder or the platform in the chains.

WORM - Lay marline or other small stuff between the strands of a rope preparatory to parceling.

YARD-AND-STAY RIG - A method of transferring a load from one point to another by means of whips or tackles spanning the two points.

YARD BOOM - Cargo boom plumbed over ship's side (Yard-and-stay rig).

YAW - To veer suddenly and unintentionally off the course.

YOKE - Athwartship piece atop the rudder stock on a small craft; wheel ropes or tiller ropes are attached to its ends.

APPENDIX C

CLASSES OF SUPPLY

CLASS	SUB-CLASS	SUB-CLASS DESCRIPTION	DESCRIPTION
I	A	Air (In-flight Rations)	Subsistence including gratuitous health and welfare items.
	R	Refrigerated subsistence	
	S	Non-refrigerated	
	C	Combat Rations	
II	B	Ground Support Material	Clothing, individual equipment, tentage, organizational tool sets and tool kits, hand tools, administrative and housekeeping supplies and equipment.
	E	General Supplies	
	F	Clothing and Textiles	
	M	Weapons	
	T	Industrial Supplies	
III	A	Air	Petroleum, Oils, and Lubricants whether packaged or bulk.
	W	Ground	
IV			Construction materials to include installed equipment and all fortification/barrier materials.
V	A	Air	Ammunition of all types to include conventional, chemical, biological, radiological, and special weapons.
	W	Ground	
VI			Personal demand items.
VII	A	Air	Major end items: a final combination of end products which is ready for its intended use; e.g. launchers, tanks, mobile machine shops, and vehicles.
	B	Ground	
	D	Administrative Vehicles	
	G	Electronics	
	K	Tactical Vehicles	
	L	Missiles	
	M	Weapons	
	N	Special Weapons	
VIII	A	Medical/Dental Material	Medical material including medical unique repair parts.
	B	Blood and Blood Products	
IX	A	Air	Repair parts and components to include kits, assemblies and sub-assemblies, reparable and non-reparable, required for maintenance support of all equipment.
	B	Ground	
	D	Administrative Vehicles	
	G	Electronics	
	K	Tactical Vehicles	
	L	Missiles	
	M	Weapons	
	N	Special Weapons	
	T	Industrial Supplies	
X			Material to support nonmilitary programs; e.g. agricultural and economic development.

APPENDIX D

LANDING FORCE SPACES

1. **General**. There are a number of misperceptions with regard to landing force space ownership; especially when it comes to maintenance, upkeep, and cleanliness. This appendix will attempt to clarify who owns the landing force spaces and the tasks, duties, and responsibilities associated with landing force spaces.

2. **Landing Force Space Maintenance**. Properly maintaining landing force spaces consumes an incredible number of man-hours and the ship's limited OPTAR resources. Shipboard manning constraints, inadequate funding, and operational/training requirements impact maintenance on every ship. Some ships seek to minimize the impact by deferring maintenance actions on landing force spaces to the period just prior to embarking landing force elements. In doing so they quickly learn that they face a nearly insurmountable task. Other commands are far more proactive and have an aggressive plan whereby daily scheduled maintenance and cleaning efforts are developed by each of the owning Departments

a. Responsibility for the maintenance, upkeep, and cleanliness of landing force spaces belongs to the Division Officer with oversight provided by the Department Head. The Combat Cargo Officer has two responsibilities with regard to landing force spaces.

(1) The Combat Cargo Officer performs an oversight function similar to that performed by the ship's Executive Officer. The Messing and Berthing Inspection performed by the Executive Officer provides an opportunity for him to evaluate the current maintenance state and quality of life (QOL) conditions in the ship's crew areas. Due to the sheer number of shipboard spaces, the Executive Officer can not possibly perform a like inspection of landing force spaces. Instead, the Executive Officer uses the Combat Cargo Officer (CCO) as his executive agent for conducting routine inspections of the landing force spaces. This assessment, using the checklist found in this appendix, is designed to evaluate the current maintenance, upkeep, and cleanliness status. The CCO should schedule monthly inspections of the landing force spaces. Once a space has been evaluated, the CCO should present the results to the Executive Officer for his comments and provide a copy of the results to the Department Head owning the space. The inspection checklist should include the quantities of items required to be maintained in/for the space and the quantity on-hand in accordance with its original design or as modified by approved ship alterations. The minimum data the CCO should be tracking in addition to what is contained in the checklist in Appendix E includes:

- Compartment Name
- Compartment Number
- Department/Division
- Discrepancy
- Date Identified
- Date Corrected
- SFWL Action Complete?
- Parts Ordered?
- 2K Required?
- 2K Submitted?
- PMA Screening Required?
- PMA Screening Completed?

(2) The second responsibility is one of support to the Department Heads and Division Officers. The support provided includes assistance in sourcing repair parts, technical assistance, and as an advocate for soliciting landing force support of habitability upgrades when troops are embarked. Normally, the landing force is amenable to providing personnel to support QOL support initiatives. Obviously some detailed prior planning must occur prior to deployment to ensure that the required materials are available and on-hand prior to the ship departing homeport.

b. Use of the monthly Zone Inspection is also recommended given that it may identify discrepancies previously unidentified.

c. Each ship should have a phased replacement program for procurement of consumable materials such as bedding, maintenance parts, tile, paint, lockers, mattresses, and other material requirements without taking a large bite out of the ship's OPTAR all at one time. Coordination with the ship's Supply Officer and Executive Officer can go a long way in making this program a viable means by which to maintain and

upgrade these spaces. In order to effect a "phased replacement" it is recommended that the date items are received or put into service be neatly stamped or marked on the item with indelible ink. The following replacement planning factors are provided as a guide. However, some items may require earlier replacement:

Item	Replace Every
Mattresses	5 years
Mattress Cover	5 year w/mattress (assumes proper care)
Pillows	7 years
Sheets	2 deployments (mandatory weekly washings increase wear)
Blankets	10 years

d. Funding deficiencies will always pose a significant stumbling block to QOL initiatives. The CCO, in concert with the ship's Department Heads, should maintain a comprehensive list of unfunded requirements. Combat cargo should be prepared to provide a detailed spending plan that identifies the unit and total costs by item (e.g., mattress, pillows, blankets, etc.). Supporting documentation that reflects the distribution of the required assets, by compartment, will make it easier to distribute assets once they are received. COMNAVSURFPAC/LANT routinely solicits inputs from the afloat commands for unfunded requirements.

3. **NAVSEA Habitability Self-Help Program**. This is an OPNAV sponsored, highly cost-effective system for Type Commanders and ship Commanding Officers to make their ships more livable. It uses the labor skills of the ship's force to accomplish habitability improvements with NAVSEA providing overall management, engineering services, procurement identification, procurement document preparation, project coordination and on board technical assistance during the work process. OPNAVINST 9640.1, Shipboard Habitability Program, provides more detailed guidance.

a. The primary objectives of the program are to:

(1) **improve the quality of life** by meeting the current CNO standards.

(2) **increase berthing accommodations** (when possible) for operators of new weaponry and ships systems.

(3) **decrease installation costs** through utilization of ship's force labor with technical assistance provided by NAVSEA.

b. It is important to note that this is the ship's project. The TYCOM, NAVSEA, ISIC, and supply activities are all dedicated to providing the necessary support and assistance. However, the success of an individual self-help project depends upon the commitment of the ship's force to see the project through to completion.

c. The baseline berthing installation requirements, under this program, include the following actions:

(1) Replace berths with modular berths with privacy partitions and berth curtains arranged in six-person cubicles, as practical, with ten-percent long berths. Total number of new berths shall be equal to or exceed existing berthing and as a minimum shall provide one berth per accommodation.

(2) Redistribute air supply terminals to provide overhead diffusers.

(3) Provide lockers for stowage of clothing and personal effects.

(4) Redistribute overhead lighting to conform to new arrangements. Provide one berth light per accommodation and mirror lights as required.

(5) Provide a means of secondary egress if one does not exist and berthing capacity exceeds 21 personnel.

(6) Provide recreation/lounge area in berthing compartments segregated from sleeping area, if total bunk count and locker cube meets minimum requirements.

(7) Provide storage for iron and ironing board. Provide bulletin boards, watch, quarters, and station boards, and mirrors.

(8) Install berth curtains.

(9) Paint compartment.

(10) Replace deck tile.

d. The baseline sanitary space installation requirements, under this program, include the following actions:

(1) Remove and replace fixtures as required in quantities to meet habitability standards. Rearrange to provide required clearances, privacy, and access.

(2) Install new CRES countertop lavatory units, watercloset partitions (supported from the overhead and bulkhead), urinal supports and dividers, shower partitions and, if space permits, drying areas.

(3) Install new shelving, soap dishes, and accessories.

(4) Modify the ventilation distribution system for efficiency and to suit the new arrangement. As space permits, either enclose or insulate the water heater located within the space.

(5) Modify piping to suit new arrangement and replace any deteriorated piping.

(6) Install improved lighting and receptacles to accommodate the new arrangement.

(7) Install new deck covering. The deck covering should be replaced with ceramic tile in accordance with the Naval Ships Technical Manual (NSTM).

(8) Prepare and paint the space in accordance with NSTM.

(9) Install service sink and cleaning gear locker where practical.

4. **Troop Bedding**. Commanding Officers of amphibious ships are required to provide bedding to all assigned personnel including passengers, embarked staffs and troops. The quantity provided should be equal to that provided members of ship's company.

a. The minimum quantities to be maintained onboard for each individual are:

(1) 1 mattress

(2) 4 sheets

(3) 1 blanket (COMNAVSURFLANT)/2 blankets (COMNAVSURFPAC)

(4) 1 pillow

(5) 2 pillow cases

b. The cost of procuring organizational bedding is funded through the use of ship’s OPTAR funds. The troop bedding should be marked for easy identification. Dying or stenciling the bedding can accomplish this.

This will act as a deterrent for those personnel seeking to use troop bedding as a means of replacing lost or damaged crew bedding.

c. The Embarked Troop Regulations should outline the ship's established troop bedding turnover procedures. These procedures should identify how bedding will be cleaned, inventoried, bundled, and stored. It should also identify the issue and receipt, and accountability procedures to be used when issuing troop bedding to embarking landing force elements.

d. One joint decision, which must be made by the Commanding Officer of Troops and the Executive Officer, pertains to extended laundry hours for troop use prior to debarkation. In an effort to expedite the turnover of spaces, some commanders will want to have troops use their sleeping bags or poncho liners the last 2-3 nights. This allows them time to use landing force personnel to wash, fold, inventory and bundle troop bedding. Other troop commanders have opted to leave personnel on the ship to perform these tasks while the ship transits to homeport. The key point to remember is that the landing force is responsible for returning troop bedding in the same condition in which they received it from the ship. Augmentation by ship's personnel is recommended for validation of quantities of bedding per bundle.

5. **Reimbursement for Assessed Damages**. The Pre-Embarkation and Debarkation Shipboard Accommodations Inspections (COMNAVSURFLANT) or Shipboard Inspection Summary (SIS) (COMNAVSURFPAC) reports are used to document the landing force space material conditions prior to and after the deployment. They represent the source documentation for assessing damages caused by landing force personnel. It is the ship's responsibility to accurately assess damages. However, this should be accomplished jointly with landing force representatives so that a mutually agreed upon dollar value is determined. Should the Commanding Officer of Troops and ship's Commanding Officer not reach an agreement, the matter is forwarded to COMNAVSURFPAC/LANT, via the respective COMPHIBRON and COMPHIBGRU, for arbitration with COMMARFORPAC/LANT. In these instances it is imperative that the ship have the appropriate documentation to support their claim. Once the assessed value of the damages is determined, the following procedures should be followed.

a. Prior to departing the ship, the landing force and ship should be in agreement on the assessed damages/costs. If the assessment is in dispute at the time of debarkation, then the dollar value of the damages must be outlined in detail in the inspection results. Once resolved at the COMMARFORLANT/PAC and Type Commander (TYCOM) level, funding for the damages will be transferred to the ship. The ship's Combat Cargo Officer must provide constant updates to the respective COMPHIBRON (while assigned) and COMPHIBGRU CCO on the status of the reimbursement until such time as payment is received.

b. Once the ship receives the money it is imperative that the funds be used to purchase the necessary materials to repair the damaged landing force spaces.

6. **Sourcing Landing Force Space Repair Parts**. There are a number of sources available to the ship for maintaining and upgrading landing force spaces. The most commonly used sources include:

a. Manufacture by a local vendor.

b. Manufacture by the Shore Intermediate Maintenance Activity (SIMA) or the commands HT or MR Shop (consult with the ship's Chief Engineer).

c. Procured through the Naval Supply System.

d. Sourced from Inactive Ships or from ships scheduled for decommissioning.

e. Investigating the availability of assets from COMPHIBGRU held or controlled stocks.

f. Querying the Defense Reutilization and Marketing Office (DRMO) Internet web site for available assets.

g. Querying other ships to determine if they have excess assets.

7. **Landing Force Space Use when Troops are not Embarked**. The use of landing force-designated spaces when troops are not embarked is permitted. However, there are a few rules and regulations that must be understood.

a. The permanent conversion of landing force spaces to ship's use requires that an approved ship alteration (SHIPALT) be held on file. These SHIPALTs must be approved up through the Headquarters, United States Marine Corps level. This requirement includes changing the compartment label plate; reconfiguration or rearrangement of the space which alters the space from its original design; the removal of any fittings, equipment, or furniture; or installation of new equipment items. If there is a doubt as to whether or not the intended modification/alteration is an approved SHIPALT, the CCO should contact the Chief Engineer and COMNAVSURFPAC/LANT Port Engineer for a copy of the SHIPALT documentation.

b. Commanding Officers of amphibious warfare ships are authorized to use troop spaces for temporary requirements as long as the space can be restored to their original configuration within 48 hours. The spaces temporarily used by the ship will not be arbitrarily deleted from the Ship's Loading Characteristics Pamphlet (SLCP). NOTE: A good idea is to check previous issues of the Ship's Loading Characteristics Pamphlet (SLCP) and the ship's Booklet of General Plans when attempting to identify changes. All troops spaces occupied by the ship on a temporary basis "will be" vacated if requested by the landing force.

8. **Points of Contact**. Figure D-1 provides points of contact for use in coordinating and supporting improvements or upgrades to landing force spaces. While telephone conversations and electronic mail (EMAIL) work well for establishing initial contact and gauging supportability of proposed improvements, naval messages are strongly recommended. The naval message formalizes the process and forces commands to either act on the request or highlight it as a future, unbudgeted requirement.

Command	Billet	Phone Number
COMNAVSURFPAC	N4312C, Habitability Engineer	(619) 437-2486
COMNAVSURFLANT	N431A2/21, Habitability Engineer	(757) 836-3475/3344

Figure D-1, Habitability Points Of Contact

9. **Landing Force Space Inspection Checklists**. Landing Force spaces will undergo a number of inspections. Whether these inspections are conducted prior to embarking or debarking landing force elements or the everyday inspections conducted by ship's combat cargo personnel the desire for consistency is the same. The following pages represent a series of baseline inspection checklists for use during each of these inspections.

a. Documenting the discrepancies within each of the landing force spaces using a checklist is but the first step in initiating corrective measures. Combat cargo personnel must consolidate the discrepancies, in some automated fashion, for ease in tracking shipboard corrective measures. Tracking can be easily accomplished through the use of a spreadsheet or database. An automated discrepancy tracking system will facilitate the validation of Ship's Force Working List (SFWL), 2K, and PMA Screening actions as well as the parts ordering process. The addition of data elements that allow Combat Cargo personnel to identify the "Date Identified" and "Date Corrected" as it relates to a specific discrepancy is also important. The value of these data elements when attempting to incite corrective actions from the ships Division Officers and Department Heads can not be over-emphasized.

b. A proactive and aggressive approach to documenting landing force space maintenance requirements must be part of the daily routine for all combat cargo personnel. These processes also expedite inspections conducted by embarking landing force personnel.

c. The following pages provide baseline landing force space inspection checklists which will assist ship's personnel and embarking organizations/units during the pre-embarkation and debarkation inspection processes.

LANDING FORCE TROOP BERTHING COMPARTMENT
INSPECTION CHECKLIST

COMPARTMENT NUMBER: DATE INSPECTED:
COMPARTMENT NAME: DEPT/DIV:

ITEM	REQUIRED QUANTITY	ON-HAND QUANTITY	EMBARK SAT/UNSAT	DEBARK SAT/UNSAT	REMARKS
Bunks (Normal)					
Bunks (Surge)					
Tricing Straps					
Bunk Safety Rails					
Mattresses					
Mattress Covers					
Pillows					
Pillow Cases					
Sheets					
Blankets					
Curtains					
Bunk Lights w/Covers					
Bunk Light Switches					
Bunk A/C Outlets					
Coffin Lockers w/Drawers					
Coffin Locker Locks					
Coat Hooks					
EEBDs					
EEBD Holders					
Irons					
Ironing Boards					
Ironing Board Lockers					
Invalid Food Tray Lockers					
Decon Medical Locker					
Soiled Clothes Locker					
Protective Clothing Locker					
Life Jacket Locker #					
Life Jacket Locker #					
Life Jacket Locker #					
Life Jacket Locker #					
Life Jacket Locker #					
Life Jacket Locker #					
Life Jacket Locker #					
Life Jacket Locker #					
Individual Lockers					
Locker Drawers					
Locker Handles					
Rifle Racks					
Rifle Rack Adapters					
Rifle Retaining Plates					
Drinking Fountain					
Cleaning Gear Locker					
Red Emergency Deck Lights					
White Lights w/Covers					
Overhead Red Lights w/covers					
Light Switches w/Covers					
Electrical Outlets w/Covers					
Thermostats					
Vents w/Covers					
Vent Piping					
Battle Lanterns					
TV w/Stand (Serial #s)					
Telephone/IVCS					
1MC Speakers					
Entertainment Speakers					
Bulletin Boards					
Tables					
Stackable Chairs					

ITEM	REQUIRED QUANTITY	ON-HAND QUANTITY	EMBARK SAT/UNSAT	DEBARK SAT/UNSAT	REMARKS
Lounge Chairs					
Wall Locker Mirrors w/Lights					
Mirrors					
Mirror Lights					
Waste Receptacles					
Fire Extinguishers (Serial #s)					
Clocks					
Mail Boxes					
Bulkheads					
Bulkhead Lagging					
Pipe Lagging					
Decks					
Doors/Hatches					
Buffers (Serial #s)					

OVERALL REMARKS:

_____ _____

(DIVISIONAL REP SIGNATURE) **(LANDING FORCE REP SIGNATURE)**

_____ _____

(CCO'S INITIALS) **(COT REPRESENTATIVE INITIALS)**

_____

(XO SIGNATURE)

(XO COMMENTS)

LANDING FORCE TROOP STORAGE COMPARTMENT
INSPECTION CHECKLIST

COMPARTMENT NUMBER: DATE INSPECTED:
COMPARTMENT NAME: DEPT/DIV:

ITEM	REQUIRED QUANTITY	ON-HAND QUANTITY	EMBARK SAT/UNSAT	DEBARK SAT/UNSAT	REMARKS
Storage Bins/Lockers					
Locker Drawers					
Locker Handles					
White Lights w/Covers					
Overhead Red Lights w/Covers					
Light Switches w/Covers					
Electrical Outlets w/Covers					
Vents w/Covers					
Vent Piping					
Battle Lanterns					
1MC Speakers					
Fire Extinguishers					
Bulkheads					
Bulkhead Lagging					
Pipe Lagging					
Doors/Hatches					
Decks					

OVERALL REMARKS:

_____ _____
(DIVISIONAL REP SIGNATURE) **(LANDING FORCE REP SIGNATURE)**

_____ _____
(CCO'S INITIALS) **(COT REPRESENTATIVE INITIALS)**

_____
(XO SIGNATURE)

(XO COMMENTS)

LANDING FORCE TROOP WASHROOM
INSPECTION CHECKLIST

COMPARTMENT NUMBER: DATE INSPECTED:
COMPARTMENT NAME: DEPT/DIV:

ITEM	REQUIRED QUANTITY	ON-HAND QUANTITY	EMBARK SAT/UNSAT	DEBARK SAT/UNSAT	REMARKS
Toilets					
Toilet Seats					
Toilet Paper Holders					
Toilet Stall Doors w/Locks					
Toilet Stall Handrails					
Urinals					
Sink Lights w/Covers					
Sinks					
Sink Stoppers					
Sink Hot/Cold Faucets					
Soap Dish, Sink					
Mirrors					
Shelves					
Towel Racks/Hooks					
Soap Dispensers					
Hand Dryer					
Space/Radiant Heaters					
Mounted Waste Receptacles					
Other Trash Receptacles					
Paper Towel Holders					
Showers w/Mats & Curtains					
Shower Heads					
Shower Deck Drains					
White Lights w/Covers					
Overhead Red Lights w/Covers					
Light Switches w/Covers					
Electrical Outlets w/Covers					
Vents w/Covers					
Vent Piping					
Battle Lanterns					
1MC Speakers					
Fire Extinguishers					
Bulkheads					
Bulkhead Lagging					
Pipe Lagging					
Doors/Hatches					
Decks					

OVERALL REMARKS:

_____ _____
(DIVISIONAL REP SIGNATURE) **(LANDING FORCE REP SIGNATURE)**

_____ _____
(CCO'S INITIALS) **(COT REPRESENTATIVE INITIALS)**

_____
(XO SIGNATURE)

(XO COMMENTS)

LANDING FORCE TROOP RIFLE STOWAGE COMPARTMENT
INSPECTION CHECKLIST

COMPARTMENT NUMBER: DATE INSPECTED:
COMPARTMENT NAME: DEPT/DIV:

ITEM	REQUIRED QUANTITY	ON-HAND QUANTITY	EMBARK SAT/UNSAT	DEBARK SAT/UNSAT	REMARKS
White Lights w/Covers					
Storage Bins/Lockers					
Locker Drawers					
Locker Handles					
White Lights w/Covers					
Overhead Red Lights w/Covers					
Light Switches w/Covers					
Electrical Outlets w/Covers					
Vents w/Covers					
Vent Piping					
Battle Lanterns					
1MC Speakers					
Fire Extinguishers					
Bulkheads					
Bulkhead Lagging					
Pipe Lagging					
Decks					
Horizontal Rifle Racks					
Vertical Rifle Racks					
Rifle Rack Keys					
Rifle Rack Lock Cylinders					
Doors/Hatches					

OVERALL REMARKS:

_____ _____
(DIVISIONAL REP SIGNATURE) **(LANDING FORCE REP SIGNATURE)**

_____ _____
(CCO'S INITIALS) **(COT REPRESENTATIVE INITIALS)**

_____
(XO SIGNATURE)

(XO COMMENTS)

LANDING FORCE TROOP WORK/OFFICE COMPARTMENT
INSPECTION CHECKLIST

COMPARTMENT NUMBER: DATE INSPECTED:
COMPARTMENT NAME: DEPT/DIV:

ITEM	REQUIRED QUANTITY	ON-HAND QUANTITY	EMBARK SAT/UNSAT	DEBARK SAT/UNSAT	REMARKS
Copiers					
Desks					
Desk Lamps					
Shelves					
Storage Cabinets/Bins					
Tables					
Chairs w/o Arms					
Chairs w/Arms					
Filing Cabinets					
Filing Cabinets (Locking)					
Safes					
Battle Lanterns					
Telephones					
1 MC/3 MC Speakers					
Bulletin Boards					
Map Board					
Worktables/Benches					
Waste Receptacles					
Radios/SECVOX					
Radios/NONSECVOX					
Clocks					
White Lights w/Covers					
Storage Bins/Lockers					
Locker Drawers					
Locker Handles					
White Lights w/Covers					
Overhead Red Lights w/Covers					
Light Switches w/Covers					
Electrical Outlets w/Covers					
Vents w/Covers					
Vent Piping					
1MC Speakers					
Fire Extinguishers					
Bulkheads					
Bulkhead Lagging					
Pipe Lagging					
Decks					
Doors/Hatches					

OVERALL REMARKS:

_____ _____
(DIVISIONAL REP SIGNATURE) **(LANDING FORCE REP SIGNATURE)**

_____ _____
(CCO'S INITIALS) **(COT REPRESENTATIVE INITIALS)**

_____
(XO SIGNATURE)

(XO COMMENTS)

LANDING FORCE TROOP OFFICER CABIN
INSPECTION CHECKLIST

COMPARTMENT NUMBER: DATE INSPECTED:
COMPARTMENT NAME: DEPT/DIV:

ITEM	REQUIRED QUANTITY	ON-HAND QUANTITY	EMBARK SAT/UNSAT	DEBARK SAT/UNSAT	REMARKS
Desk					
Swivel Chair w/Wheels					
Chairs w/Arms					
Lounge Chairs					
Couch					
Round Table					
Coffee Table					
Table Lamps					
Standing Shelves					
Hanging Bookshelves					
Standing Bookshelves					
Chest of Drawers					
TV/VCR					
TV Stand					
Wall Lamps					
White Lights w/Covers					
Light Switches w/Covers					
Electrical Outlets w/Covers					
Thermostat					
Vents w/Covers					
Waste Receptacles					
Telephone					
Ceilings					
Vent Piping					
Battle Lantern					
Bulkheads					
Doors/Hatches					
Deck					

OVERALL REMARKS:

_____ _____
(DIVISIONAL REP SIGNATURE) **(LANDING FORCE REP SIGNATURE)**

_____ _____
(CCO'S INITIALS) **(COT REPRESENTATIVE INITIALS)**

_____
(XO SIGNATURE)

(XO COMMENTS)

LANDING FORCE TROOP OFFICER STATEROOM
INSPECTION CHECKLIST

COMPARTMENT NUMBER: DATE INSPECTED:
COMPARTMENT NAME: DEPT/DIV:

ITEM	REQUIRED QUANTITY	ON-HAND QUANTITY	EMBARK SAT/UNSAT	DEBARK SAT/UNSAT	REMARKS
Bunks (Normal)					
Bunks (Surge)					
Mattresses					
Mattress Covers					
Pillows					
Pillow Cases					
Sheets					
Blankets					
Curtains					
Bunk Lights w/Covers					
Bunk Light Switches					
EEBDs					
EEBD Holders					
White Lights w/Covers					
Overhead Red Lights w/Covers					
Light Switches w/Covers					
Electrical Outlets w/Covers					
Thermostat					
Vents w/Covers					
Vent Piping					
Safes					
Chairs					
Waste Receptacles					
1MC Speakers					
Entertainment Speakers					
Coat Hooks					
Standup Lockers					
Standup Lockers w/Drawers					
Entertainment Speaker					
Battle Lanterns					
Telephone					
Sink w/Light					
Towel Racks					
Soap Dish					
Cup/Toothbrush Holders					
Mirrors					
Mirror Lights					
Bulkheads					
Bulkhead Lagging					
Pipe Lagging					
Doors/Hatches					
Deck					

OVERALL REMARKS:

_____ _____
(DIVISIONAL REP SIGNATURE) **(LANDING FORCE REP SIGNATURE)**

_____ _____
(CCO'S INITIALS) **(COT REPRESENTATIVE INITIALS)**

_____
(XO SIGNATURE)

(XO COMMENTS)

LANDING FORCE TROOP OFFICER STORAGE ROOM
INSPECTION CHECKLIST

COMPARTMENT NUMBER: DATE INSPECTED:
COMPARTMENT NAME: DEPT/DIV:

ITEM	REQUIRED QUANTITY	ON-HAND QUANTITY	EMBARK SAT/UNSAT	DEBARK SAT/UNSAT	REMARKS
Storage Bins/Lockers					
Locker Drawers					
Locker Handles					
White Lights w/Covers					
Overhead Red Lights w/Covers					
Light Switches w/Covers					
Electrical Outlets w/Covers					
Vents w/Covers					
Vent Piping					
Battle Lanterns					
1MC Speakers					
Fire Extinguishers					
Bulkheads					
Bulkhead Lagging					
Pipe Lagging					
Decks					
Doors/Hatches					

OVERALL REMARKS:

_____ _____
(DIVISIONAL REP SIGNATURE) **(LANDING FORCE REP SIGNATURE)**

_____ _____
(CCO'S INITIALS) **(COT REPRESENTATIVE INITIALS)**

_____
(XO SIGNATURE)

(XO COMMENTS)

LANDING FORCE TROOP OFFICER WASHROOM
INSPECTION CHECKLIST

COMPARTMENT NUMBER: DATE INSPECTED:
COMPARTMENT NAME: DEPT/DIV:

ITEM	REQUIRED QUANTITY	ON-HAND QUANTITY	EMBARK SAT/UNSAT	DEBARK SAT/UNSAT	REMARKS
Toilets					
Toilet Seats					
Toilet Paper Holders					
Toilet Stall Doors w/Locks					
Toilet Stall Handrails					
Urinals					
Sink Lights w/Covers					
Sinks					
Sink Stoppers					
Sink Hot/Cold Faucets					
Soap Dish, Sink					
Mirrors					
Shelves					
Towel Racks/Hooks					
Soap Dispensers					
Hand Dryer					
Space/Radiant Heaters					
Mounted Waste Receptacles					
Other Trash Receptacles					
Paper Towel Holders					
Showers w/Mats & Curtains					
Shower Heads					
Shower Deck Drains					
White Lights w/Covers					
Overhead Red Lights w/Covers					
Light Switches w/Covers					
Electrical Outlets w/Covers					
Vents w/Covers					
Vent Piping					
Battle Lanterns					
1MC Speakers					
Fire Extinguishers					
Bulkheads					
Bulkhead Lagging					
Pipe Lagging					
Doors/Hatches					
Decks					

OVERALL REMARKS:

_____ _____
(DIVISIONAL REP SIGNATURE) **(LANDING FORCE REP SIGNATURE)**

_____ _____
(CCO'S INITIALS) **(COT REPRESENTATIVE INITIALS)**

_____
(XO SIGNATURE)

(XO COMMENTS)

APPENDIX E

REFERENCES AND GENERAL ADMINISTRATION

1. **General**. This chapter focuses on the major supporting references and general administration procedures combat cargo personnel must rely on during their assignments. An integral part of the general administration process is the development and routine maintenance of desktop procedures and turnover folders. The hazards associated with shipboard life and forward presence mandate that we be able to rapidly integrate replacement personnel as quickly as possible. This same precept holds true during the normal turnover process wherein the expeditious and detailed passing of information warrants a concise, organized approach.

2. **References**. Combat Cargo personnel will require routine or daily access to a wide variety of references and publications. For purposes of discussion, having "access to" is defined as either having the document on-hand in the combat cargo office or having the ability to source the required document from other shipboard departments/locations or via the Internet. The ability to source the required documents from Internet sources is permitted and highly recommended. The following references and publications form the baseline by which evaluations and adequacy of source documentation will be measured.

a. Department of Defense and Joint Publications.

(1) DOD Financial Management Regulations (DODFMR)

(2) Joint Federal Travel Regulations

(3) Joint Pub 1-02; DOD Dictionary of Military and Associated Terms

(4) Joint Pub 3-02; Joint Doctrine for Amphibious Operations

(5) Joint Pub 3-02.2; Joint Doctrine for Amphibious Embarkation

(6) Joint Pub 4-01.3; JTTP for Movement Control

(7) Joint Pub 4-01.5; JTTP for Water Terminal Operations

(8) Joint Pub 4-01.6; JTTP for Joint Logistics Over the Shore

(9) Joint Pub 4-01.7; JTTP for Use of Intermodal Containers in Joint Operations

b. Secretary of the Navy and OPNAV Instructions.

(1) SECNAVINST 1650.1; Navy/Marine Corps Awards Manual

(2) SECNAVINST 5500.4; Reporting Missing, Lost, Stolen, or Recovered (MLSR) Government Property

(3) OPNAVINST 3120.32; Standard Organization and Regulations of the US Navy

(4) OPNAVINST 3125.2; Embarkation Basing of USMC Helicopters on Amphibious Ships

(5) OPNAVINST 4720.93; Unauthorized Alterations of Ships Prohibition

(6) OPNAVINST 5720.2; Embarkation of USN Ships

(7) OPNAVINST 6250.4; Pest Control

(8) OPNAVINST 7220.4; Incentive Pay for the Performance of Hazardous Duty during Flight Operations on the Flight Deck of Ships which are Certified to Launch Aircraft

(9) OPNAVINST 8023.20; Waivers of and Exemption from Explosives Safety Requirements; Policies and Procedures for Requesting

(10) OPNAVINST 8023.21; Explosives Safety Standard for U.S. Navy Combatant Ships and Tenders at U.S. Naval Stations and Similar Support Activities

(11) OPNAVINST 9640.1; Shipboard Habitability Program

(12) OPNAVINST 10470.15; Allowance of Life Preservers for Ships and Craft

c. Marine Corps Orders and Regulations.

(1) Marine Corps Total Force Structure Personnel Reporting Instructions Manual (TFSPRIM)

(2) Marine Corps Manual

(3) MCO P1020.34; USMC Uniform Regulations

(4) MCO P1080.20; Marine Corps Total Force System Code Manual

(5) MCO P1200.7; Military Occupational Specialties Manual

(6) MCO 1500.51, Marine Battle Skills Training Program

(7) MCO 1500.52, Marine Combat Water Survival Training (MCWST)

(8) MCO 1510.61; Individual Training Standards (ITS's) for Logistics Occupational Field (OCCFLD) 04

(9) MCO 1510.89, ITS System for MBST, Volume I Entry Level

(10) MCO 1510.90, ITS System for MBST, Volume II CPL through GYSGT

(11) MCO P1610.7; Performance Evaluation System

(12) MCO P3040.4; Marine Corps Casualty Procedures Manual

(13) MCO 3120.9; Policy for Marine Corps Expeditionary Unit (Special Operations Capable)

(14) MCO 3400.3, Nuclear, Biological, and Chemical Defense Training

(15) MCO 3574.2, Marksmanship Qualification/Re-qualification Training with the M16 Service Rifle and M9 Service Pistol

(16) MCO P4000.51; Automatic ID Technology Policy Manual

(17) MCO P4600.7; Marine Corps Transportation Manual

(18) MCO 4610.32; Standing Operating Procedure for Collecting and Recording Dimensions and Weights of Marine Corps End Items of Equipment for Airlift Certification

(19) MCO 4610.35; Marine Corps Equipment Characteristics File

(20) MCO 4680.5; Containerization Policy

(21) MCO 5300.10; Sexual Harassment

(22) MCO P5300.12, The Marine Corps Substance Abuse Program

(23) MCO 6100.3; Physical Fitness

(24) MCO 8010.1; Class V(W) Available Supply Rates for Fleet Marine Force Combat Operations

(25) MCO P8011.4; Marine Corps Table of Allowance for Class V(W) Material (Peacetime)

(26) MCO 8020.1; Handling, Transportation, Reclassification and Disposal of Class V(W) Material

(27) Marine Corps Bulletin 6250; Meals-Ready-to-Eat (MRE) Rations Pest Control Program

d. Allied Tactical and Naval Warfare Publications.

(1) ATP 8(A); Doctrine for Amphibious Operations

(2) ATP 36; Amphibious Operations Ship to Shore Movement

(3) ATP 39; Amphibious Embarkation

(4) NWP 14 (Rev E); Replenishment at Sea

(5) NWP 22-3; Ship to Shore Movement

(6) NWP 22-5; The Naval Beach Group

(7) NWP 22-8; MSC Support of Amphibious Operations

(8) NWP 42; Shipboard Helicopter Operations Procedures

e. Navy/Marine Corps Publications.

(1) NAVMC 1017; Table of Authorized Material

(2) NAVMC 2761; Catalog of Publications

f. Marine Corps Doctrinal Publications.

(1) FMFM 3-1; Command and Staff Action

(2) FMFRP 4-17; Intermodal Containerization in the MAGTF

(3) MCWP 3-11.4; Helicopter Operations

(4) MCRP 3-31B; Amphibious Ships and Landing Craft Data Book

(5) MCWP 3-31.5; Ship to Shore Movement

(6) MCWP 4-11.3; Transportation Operation

(7) MCRP 4-11.3D; The Naval Beach Group

g. Naval Sea Systems Command Operational Publications, Instructions, and Notices.

(1) NAVSEA 9086/11; Technical Manual for Batteries, Navy Lithium Safety Program Responsibilities and Procedures

(2) NAVSEA OP 4; Ammunition Afloat

(3) NAVSEA OP 2165; Navy Transportation Safety Handbook for Ammunition

(4) NAVSEA OP 2173; Approved Handling Equipment for Weapons and Explosives Vol 1 &2

(5) NAVSEA OP 2213/NAVAIR 11-17-5; Approved Handling Equipment for Weapons and Explosives

(6) NAVSEA OP 4550; Handling and Stowage of Amphibious Assault Ammunition Aboard Amphibious Ship

(7) NAVSEA OP 44617; Ordnance Handling Equipment Transfer Units

(8) NAVSEA OP 44941; Periodic Testing Arrangements for Ordnance Handling Equipment

(9) NAVSEA SWO010-AF-ORD-01A - Identification of Ammunition

(10) NAVSEA TWO010-AA-ORD-030/NAVAIR 11-1-116B; Navy Ammunition Logistics Code

(11) NAVSEA TWO010-AC-ORD-010 (VOL 1 & 2); Inspection Requirements for Receipt, Segregation, Storage and Issue of Navy and Marine Corps Conventional Ammunition

(12) NAVSEA TWO024-AA-ORD-010 - Unserviceable, Suspended and Limited Use Ammunition

(13) NAVSEANOTE 8023 - Afloat Explosives Safety Checklist

(14) NAVSEAINST 8090.9; Non-Nuclear Ordnance and Explosives Handling Qualification and Certification Program

(15) NAVSEAINST 8023.12 Shipboard Explosives Safety Inspection Program

(16) NAVSEAINST 8023.5C - Ammunition, Explosives, and Related Hazardous Material Shipment Discrepancy Reporting

(17) NAVSEAINST 10490.1; Connected/VERTREP Equipment for Handling Cargo

h. Naval Air Systems Command Manuals.

(1) NAVAIR 00-80T-106, LHA/LPH/LPD NATOPS Manual

(2) NAVAIR 11-1-116B/TWO 10-AA-ORD-030; Navy Ammunition Logistic Code

(3) LHA/LHD NATOPS MANUAL

i. CINCPACFLT and COMNAVSURFPAC Instructions (West Coast/WESTPAC Commands Only).

(1) CINCPACFLTINST 5729.2M; Embarkation in U.S. Naval Ships

(2) CINCPACFLTINST 8010.12; Pacific Fleet Conventional Ordnance Management Manual

(3) CINCPACFLTINST S140.2; Fleet Marine Force Pacific Map and Aeronautical Chart Allowance Lists

(4) CINCPACFLTINST 5729.2M; Embarkation in U.S. Naval Ships

(5) CINCPACFLTINST 6250.1; Agriculture Quarantine Inspections of Naval Vessels

(6) CINCPACFLTINST 8010.12; Pacific Fleet Conventional Ordnance Management Manual

(7) COMNAVSURFPACINST 3120.6; Standard Operating Procedures (SOP) for Assault Amphibious Vehicles (AAV) Afloat Operations Aboard LPD/LSD/LHA Type Ships

(8) COMNAVSURFPACINST 3340.3; Helicopter and VSTOL Operations Aboard COMNAVSURFPAC Air Capable Ships

(9) COMNAVSURFPACINST 3502.2B; Surface Force Training Manual

(10) COMNAVSURFPACINST 3710.6; Aviation Standard Operating Procedures for Air Capable Ships

(11) COMNAVSURFPACINST 4080.1; Prepositioning of Landing Force Operational Reserve Material and Mission Load Allowance (LFORM/MLA) Aboard Amphibious Assault Ships of the U.S. Pacific Fleet

(12) COMNAVSURFPACINST 4400.1; Force Supply Manual

(13) COMNAVSURFPACINST 4600.2; Policy for Utilization of Opportune Lift (OPLIFT)

(14) COMNAVSURFPACINST 4621.1; Standard Amphibious Embarkation Documentation Procedures

(15) COMNAVSURFPACINST 4650.1; Helicopter Transportation of Non-Military Personnel

(16) COMNAVSURFPACINST 5355.3/FMFPACO 5355.2; Unit Sweep Urinalysis Testing of Ships with Marines Embarked

(17) COMNAVSURFPACINST 5400.1; Naval Force U.S. Pacific Fleet Regulations

(18) COMNAVSURFPAC NOTICE 5720; Procedures for Embarkation Aboard U.S. Naval Vessels

(19) COMNAVSURFPACINST 5840.1; Military Customs Inspections

(20) COMNAVSURFPACINST 7010.1; Recreation Fund Support to Navy Staffs and FMF Units Embarked Onboard Ships of SURFPAC Ships

(21) COMNAVSURFPACINST 7320.1; Troop Space Inventory/Inspection/Reimbursement Procedures

(22) COMNAVSURFPACINST 9010.1; Instructions for Preparation of Ships Loading Characteristics Pamphlet

(23) COMNAVSURFPACINST 9280.1; Surface Debarkation Stations

(24) COMNAVSURFPACINST 10490.1C; Portable Cargo Ordnance and Missile Handling Equipment Allowance for Amphibious Warfare Ships.

(25) COMNAVSURFPACINST 13650.1F; Management and Control of Support Equipment

i. CINCLANTFLT and COMNAVSURFLANT Instructions (East Coast Commands Only).

(1) CINCLANTFLTINST 3501.1; Amphibious Ready Group/Tactical Amphibious Squadron Intermediate/Advanced Training, Assessment, and Certification

(2) CINCLANTFLTINST 4600.2; Opportune Lift

(3) CINCLANTFLTINST 4790.3; Joint Fleet Maintenance Manual Vol 1-5

(4) CINCLANTFLTINST 8010.12; Atlantic Fleet Conventional Ordnance Management Manual

(5) CINCLANTFLTINST 8020.3; Atlantic Fleet Ordnance Handling Safety and Assistance Team

(6) COMNAVSURFLANTINST 3000.3; Landing Force Spaces and Material Aboard COMNAVSURFLANT Ships

(7) COMNAVSURFLANTINST C3120.3; Amphibious Ready Group and Marine Landing Force Planning for Assignment to the Mediterranean Amphibious Ready Group (MARG) and Landing Force Fleet

(8) COMNAVSURFLANTINST 4080.1; LFORM Aboard Amphibious Warfare Ships, Atlantic Fleet

(9) COMNAVSURFLANTINST 5400.1; Naval Surface Force US Atlantic Fleet Regulations

(10) COMNAVSURFLANTINST 9000.1; SURFLANT Maintenance Manual

(11) COMNAVSURFLANTINST 9000.2; SURFLANT SIMA Routine

(12) COMNAVSURFLANT NOTE 8023; Explosives Handling Personnel Qualification and Certification Training Guide

(13) COMNAVSURFLANTINST 8023.4; Explosives Handling Personnel Qualification and Certification Program

j. Joint COMNAVSURFLANT/COMNAVSURFPAC Instructions.

(1) COMNAVSURFPAC/COMNAVSURFLANTINST P3000.15; FMFPAC/LANTO P3000.15; Standing Operating Procedures for Raiding Craft

(2) COMNAVSURFPAC/COMNAVSURFLANTINST 3340.3; Wet Well Operations Manual

(3) COMNAVSURFPAC/COMNAVSURFLANTINST 3840.1; Joint Surf Manual

(4) COMNAVSURFPACINST 9010.1/COMNAVSURFLANTINST 9010.2; Ships Loading Characteristics Pamphlet (SLCP)

k. Marine Forces, Atlantic Orders (East Coast Commands Only).

(1) MARFORLANTO P3100.2; Standing Operating Procedures for Landing Force Sixth Fleet Deployments

(2) MARFORLANTO 3120.10; COMNAVSURFLANTINST 3120.3; Preparation for Overseas Movement Planning Exercise (POMPEX)

(3) MARFORLANTO P3120.15; SOP for MAGTF Deployments

(4) MARFORLANTO C3129.2; Amphibious Ready Group Force (ARF) Amphibious Ready Force (U)

(5) MARFORLANTO 3500.2/COMNAVSURFLANTINST 3500.4; COMNAVAIRLANTINST 3500.51; Amphibious Aviation Ship (LPH/LHA/LHD), LPD and Embarked Aviation Unit Readiness Training Plan

(6) MARFORLANTO 4000.4; SOP for Logistics

(7) MARFORLANTO P4000.51; SOP for LOGMARS

(8) MARFORLANTO 4035.2; Tactical Marking Procedures for Equipment and Embarkation Equipment

(9) MARFORLANTO P4600.33; Standing Operating Procedures for Strategic Mobility

(10) MARFORLANTO 4600.34; Management of Transportation of People (TOP), Things (TOT) and Port Handling/Stevedoring (PH/S)

(11) MARFORLANTO P8000.1/MARFORPACO P8000.2; SOP for Ground Ordnance

(12) MARFORLANTO P8000.2/MARFORPACO P8000.3; Standing Operating Procedures for Class V(W) Material

l. Miscellaneous Instructions, Notices, and Reference Documents.

(1) CNO LTR OF 8 FEB 82; Troop Accommodations in Amphibious Ships

(2) CNETINST 3541.1C; Firefighter Trainer Certification Program

(3) OH 1-100; Joint Doctrine for Landing Force Ops

(4) OH 5-3A; Helo External Cargo Loading

(5) MTMCTEA 94-700-2; Logistic Handbook for Strategic Mobility Planning

(6) MTMCTEA 95-55-22; Marine Lifting and Lashing Handbook

(7) S9LCA-AA-SSM-040 VOL 3; SEAOPS Manual for LCAC Well Deck Operations

(8) S9LCA-AA-SSM-050 SEAOPS Vol IV/PART I; LCAC Cargo Loading Manual

(9) NAEC-ENG-7576; Shipboard Aviation Facilities Resume'

(10) EWTGLANTINST 1500.4D, EWTGLANT Course Catalog

(11) SPCCINST 8010.12D; Conventional Ammunition Integrated Management System

(12) NAVORDCENINST 8010.2; Management of Conventional Ammunition

(13) EWTGPAC 5000.2; Administrative Procedures for Personnel of Separate MCC's administratively attached to EWTGPAC

(14) Navy SWOPS H-1; Handling Equipment

(15) Code of Federal Regulations Title 49 (Part 140-155) - Shipping

3. **Ship's Loading Characteristics Pamphlet (SLCP)**. The SLCP is a tabulation of the principle characteristics of a ship that pertain to embarkation. It contains the ship's military lift characteristics in ready reference format and is based on the data in the ship's booklet of general plans and the ship's present configuration as modified by authorized alterations. Its purpose is to provide the detailed information required by embarkation planners to plan the loading of a particular amphibious ship. The reference, which provides the standard format and instructions for SLCP preparation and prescribed format, is COMNAVSURFLANTINST 9010.2_/ COMNAVSURFPACINST. The CCO is responsible for the timely and accurate review, update, and promulgation of the SLCP.

4. **Embarked Troop Regulations**. The Embarked Troop Regulations are an official document prepared by the ship's Combat Cargo Officer and signed/approved by the ship's Commanding Officer.

a. It is recommended that the troop regulations also be made available in excerpt or abbreviated form to facilitate promulgation to the lowest troop level possible. The excerpts may be developed and distributed by the ship. Should the ship elect not to develop and distribute an excerpt, the CCO should provide an electronic copy of the regulations to embarking landing force elements to facilitate their efforts in this regard.

b. Each amphibious ship is required to promulgate regulations governing embarked troops. The contents of these regulations are of interest to the leadership of company sized and larger units. The CCO should ensure that every battalion/squadron and the Commanding Officer of Troops (COT) receives a minimum of 2 copies for their command. This distribution can occur during scheduled load planning conferences or via electronic means. However, professional courtesy makes hand delivery the preferred method. The regulations must be approved by the ship's Commanding Officer and should contain the following minimum information:

(1) COMMAND RELATIONSHIPS
- Commanding Officer
- Commanding Officer of Troops (COT)
- Separate Marine Unit Commanding Officer
- Embarked USMC, Army, Air Force Units and Passengers
- Authority of Officers Embarked as Passengers
- Executive Officer of the Ship
- Command Duty Officer
- Officer of the Deck
- Combat Cargo Officer
- Indoctrination of Embarked Units
- Officers' Call and Eight O'clock Reports

(2) EMBARKATION
- Additional Duty Assignments for Embarked Officers
- Ship's Platoon
- The Advance Party
- Inspections
- Cargo
- Embarkation Plans and Documents

(3) BILLETING
- Billeting Officer
- Billeting Plans
- Officer Billeting
- Staff NCO Billeting
- Female Berthing
- Special Berthing Considerations
- Bedding
- Compartment Facilities, Electrical Appliances, Entertainment Systems and Climate Control
- Berthing Regulations

(4) MESSING
- Officers Messing
- Uniforms for Embarked Officers
- Wardroom Seating
- Mess Bills
- Staff NCO/CPO Mess

- E-6 Mess
- Troop Mess Officer
- Medical Examinations
- Mess Hours and Late Meals
- Commuted Rations
- Marine Battle Messing (During General Quarters)

(5) MEDICAL AND SANITATION
- Sick Call (Location and Hours)
- Sick Bay Regulations
- Emergency First Aid Boxes
- Pre-Embarkation Sanitation Inspection
- Embarking Sick Personnel
- Sick Personnel Left Aboard
- Barber Facilities
- Laundry Facilities
- Trash Disposal

(6) EMERGENCY PROCEDURES
- Indoctrination
- Participation
- Emergency Signals
- General Quarters
- Fire/ Flooding Alarm
- CBR Defense
- Collision
- Man Overboard
- Embarked Personnel Assistance
- Prepare to Abandon Ship
- Abandon Ship
- Life Vests
- Emergency Breathing Apparatus
- Emergency Destruction of Classified Material

(7) GENERAL REGULATIONS
- Alcohol and Narcotics
- Boats and Rafts
- Government Property
- Liberty
- Shore Patrol
- Lifelines and Rails
- Postal Service
- Recreation Facilities
- Restricted Areas
- Ship's Store
- Snack Bar (If applicable)
- Smoking/ Tobacco Products
- Saluting and Other Marks of Respect
- Muster Reports
- General Announcing System
- Telephone System
- Uniform Aboard Ship
- Water Conservation
- Taps
- Security of Personal Effects
- Cameras and Radios

- Orderliness in Various Service Lines
- Clothing
- Quarterdeck Etiquette
- Ship's Entertainment and Closed Circuit Television (CCTV) System
- Chapel Services
- Collective Protection System (CPS) (If applicable)
- Sunbathing
- Cellular Telephones

(8) SECURITY
- Unauthorized Dissemination of Information
- Darken Ship
- Ship's Trail
- Mail
- Prohibited Topics
- Emission Control (EMCON)

(9) CLEANING AND PRESERVATION
- Responsibility
- Individual Responsibility
- Pre-Embarkation Inspection
- Daily Inspection
- Head and Washroom Responsibility
- Cleaning Gear
- Butt Kits and Trash
- Debarkation Clean-up

(10) DISCIPLINE AND CONFINEMENT
- Responsibility for Discipline
- Disciplinary Action
- Officers Empowered to Administer Discipline
- Searches
- Treatment of Prisoners
- Ship's Brig
- Confinement

(11) TROOP SECURITY FORCE
- Establishment of the Force/ Mission
- Organization of the Security Force
- Air Department Integrity
- Troop Guard
- Control of the Guard
- Duties of the Guard
- Drills and Inspection of the Guard
- Sentry Posts
- Special Orders for the Guard
- General Troop Guard Orders (Guard Officer, Troop OOD, SOG, COG, Super Num)
- Special Orders for each Post (i.e. #1 Upper Vehicle Stowage and Well Deck)
- Uniform and Equipment
- Guard Messing
- Guard Berthing
- Fire and Security Watches for Troop Living Compartments (Firewatches))

(12) AMMUNITION AND HAZARDOUS MATERIAL HANDLING
- Ammunition
- Ship's Stowage Facilities for POL

- Handling and Stowage of Fuels in Portable Containers
- POL
- Loose Ammunition and Weapons
- Lithium Batteries
- Incendiary (Thermite) Grenades

(13) DEBARKATION
- Debarkation
- Debarkation Control
- Flight Deck Aircraft Operations
- Hangar Deck Operations
- Well Deck Operations
- Assault Debarkation Control
- Passenger Manifest for Assault Helicopter Operations
- Administrative Manifesting
- Debarkation of Personnel (Air)
- Debarkation of Personnel (Surface)
- Cargo and Vehicle Debarkation (Air)
- Cargo and Vehicle Debarkation (Surface)
- Ship's Elevators
- Helicopter Passenger Instructions

(14) COMMUNICATIONS
- Ship's Communications Officer
- Troop Communications Officer
- Joint Message Center / Record Message
- RADHAZ/EMCON/HERO
- DIMENSION 2000 Dial Telephone System Circuit J (Ckt J)
- Man-On-The-Move
- Sound-powered Telephone System
- General Announcing System
- Closed Circuit Television System

(15) REPORTS
- General
- Embarked Personnel/Material Report (EPMR)
- Pre-Embarkation Accommodations Inspection Report
- Debarkation Accommodations Report

(16) APPENDIX A
- Personnel Augmentation Requirements from Embarked Organizations
- Personnel Augmentation Requirements From Embarked Organizations to Support 1200 Embarked Personnel (Matrix)

(17) APPENDIX B
- Berthing Space Inspection Checklist
- Office Space Inspection Checklist
- Cleaning Gear/Supplies Inspection Checklist

5. **Desktop Procedures**. Desktop procedures should be maintained for each combat cargo billet aboard ship. Topics, which should be included/addressed, include:

a. Billet description.

b. Areas of responsibility.

c. Required training.

d. Relationship to other departments/divisions.

e. Tool/equipment requirements.

f. Personnel augmentation requirements for ship's platoon and 1A personnel.

g. Communications requirements.

h. Ship's points of contact.

i. Safety requirements.

j. Recall roster.

k. Sample copy of required reports and their periodicity.

l. Synopsis of the Phased Replacement Program and a list of those items included for maintenance/upkeep of Landing Force spaces.

m. Ship's short and long range schedule.

n. Copy of the current LOGAIS generated Unit Deployment Listing (UDL).

o. Table of Organization (T/O)

6. **Turnover Folders**. Combat Cargo should also maintain a turnover folder that includes, at a minimum, the following topics:

a. Detailed description of their tasks, duties and responsibilities.

b. Reference library inventory.

c. Office equipment inventory.

d. Internal (ship's) and external (higher and adjacent headquarters) points of contact.

e. Collateral duty assignments.

f. Ongoing Landing Force space projects.

g. Future Landing Force space projects.

h. Approved Ship Alterations (ShipAlts) and Alterations Equivalent to Repair (AER)

i. Inspection results (to include INSURV, Pre-embark/Debark Accommodations or SIS, and CO/XO).

j. Detailed description of the daily routine.

k. Sample internal correspondence documentation.

l. Sample external correspondence documentation.

m. Current budget and expenditure data.

n. Administrative support procedures.

o. Status of Marine Corps annual training requirements.

p. Command organizational chart.

q. Copies of previous command bulletins outlining onload/offload plans for supplies, equipment, LFORM and ammunition.

r. Current inventory of ships lashing, cargo strap, tie down, and material handling equipment and the Ship's Automated Equipment List (AEL).

7. **Inspections and Evaluations**. There are no administration specific inspections that evaluate the administrative health of a ship's combat cargo section. However, there are two opportunities that can be used to assess administrative readiness.

a. The first such opportunity is in conjunction with visits by the Force, Group, or Amphibious Squadron (PHIBRON) Combat Cargo Officers. In addition to assessing the overall condition and maintenance of landing force spaces, these officers may elect to evaluate the administrative readiness using the checklist reflected in Annex D.

b. The second opportunity occurs during the turnover process. The relieving Combat Cargo Officer and senior Combat Cargo Assistant should have a mechanism in place by which they can quickly gauge the overall administrative readiness of combat cargo. This can best be accomplished through the use of a turnover checklist. This checklist serves as a means by which to standardize the assessment process and as a ready reference for the conduct of a methodical, organized turnover. Once complete, the results can be appended as an enclosure to assumption of duties letter normally provided to the ship's Commanding Officer. Each Combat Cargo Officer should consult their respective Amphibious Group Combat Cargo Officer for more information.

8. **Publications Ordering**. Publications should be ordered using the established procedures for each command. Publications can also be sourced from various Internet sites. The following sites provide access to the indicated publications, regulations, and associated supporting documents.

http://neds.nebt.daps.mil – provides access to the Navy electronic directives systems for OPNAV and SECNAV instructions.

http://www.usmc.mil/info.nsf.info – Marine Corps site for access to ALMARs, MARADMINs, Marine Corps Orders (MCO), pay charts, and technical manuals.

http://www.dtic.mil/doctrine/jel/index.html – Joint electronic library which provides access to Chairman, Joint Chiefs of Staff (CJCS) instructions, manuals, and notes. This site also provides access to Joint Pubs, Army Field Manuals (FMs), and Marine Corps Fleet Marine Force Manuals (FMFMs).

http://wwwdev.noclant.navy.mil/IMSD/pubs.html – Naval Ordnance Center (NOC) homepage that provides the browser access to NARS, Overhead Fire messages, AIGs, and limited munitions related publications/documents.

http://138.156.112.14/tfsd/page8.html – Marine Corps Combat Development Command (MCCDC) homepage for Total Force Structure (TFS) issues and access to current and future Tables of Organization (T/Os)

http://www.defenselink.mil/pubs/#REGS – This is the Department of Defense (DOD) web site which provides access to DOD directives, instructions, regulations, and manuals. Access to the specific documents is best accomplished by selecting the "Directives and Instructions" option listed under "regulations and Forms".

http://pubs.ala.usmc.mil/front.htm – Marine Corps Logistics Base (MCLB) Albany website which provides online technical publications plus numerous links to other doctrinal and publication websites.

http://www.doctrine.quantico.usmc.mil – the Marine Corps' doctrinal publication site. Access to this site is also available from the Headquarters Marine Corps website at http://www.usmc.mil

http://ndcweb.navy.mil/Doctrine/index.htm – a site dedicated to providing access to Navy doctrinal publications.

AMMUNITION COMPATIBILITY CHART

AMMUNITION GROUP AA

A005	A130	A576	AX14	B643	D509	F562	G955	K092	L275	L540	M031*	M688	MG40	N278	PE96	4W28
A011	A131	A605	B504	B647	D510	FW92	G963	K143	L283	L541	M162	M766	MG61	N285	PL23	4W29
A014	A136	A606	B505	C226	D514	G213	H567	K180	L302	L542	M174	M814	MJ21	N286	PL87	4W73
A017	A140	A608	B506	C256	D515	G214	H812	K181	L304	L543	M190	M842	MJ91	N289	PL89	9W23
A023	A165	A665	B508	C380	D532	G215	H842	K250	L306	L544	M193	M845	ML03	N290	PL95	9W24
A024	A171	A676	B509	C445	D533	G216	H893	K867	L307	L580	M308	M862	MM91	N340	PM80	
A059	A191	A677	B519	C449	D540	G217	H930	K870	L311	L585*	M500	M905	MM92	N463*	PV66	
A063	A260	A692	B534	C479	D541	G382	H931	K885	L312	L594	M514	M997	MM93	N464*	SS01	
A064	A358	A762	B535	C868	D544	G815	H933	L118	L314	L599	M543	MD15	MT23	N523	XW70	
A068	A362	A772	B542	C869	D563	G826	HX05	L131	L323	L601	M596	MD16	MT85	N659	XW77	
A071	A363	A896	B545	C870	D579	G881	HX06	L132	L324	L610	M597	MD65	MT95	PB55	XW78	
A075	A400	A974	B546	C871	D864	G895	HX07	L133	L325	LW53*	M627	MD66	MW02	PB69	XW79	
A080	A475	A975	B567	C995	DWBS	G911	HY71	L161	L328	LW60	M643	MF29	MW19	PB92	2W04	
A086	A518	A978	B568	D003*	E893	G924	J143	L193	L441*	LW62	M644	MF60	MW37	PB93	2W05	
A102	A552	A979	B576	D501	EW76	G930	J147	L201	L442	LX21	M647	MF66	MW56	PB97	2W11	
A106	A555	A981	B584	D502	F392	G940	J271	L227	L451	M012	M648	MF72	MW80	PC06	2W89	
A111	A557	A982	B627	D503	F470	G945	J329	L258	L495	M015	M670	MF78	MW82	PC91	3W80	
A112	A562	AX11	B642	D505	F534	G950	J345	L273	L518	M028*	M682	MG39	MW86	PD63	3W92	

AMMUNITION GROUP BB

A005	A063	A102	A140	A400	D501	FW92	HY71	M130	M644	M905	MG61	MM53	MM92	MW56	N290	XW77
A011	A064	A106	A165	A475	D502	G213	J329	M131	M648	M997	ML03	MM54	MM93	MW80	N331	XW78
A014	A068	A111	A171	AX11	E893	G214	K092	M193	M670	MD15	ML65	MM55	MT23	MW86	N335	XW79
A017	A071	A112	A191	AX14	EW76	G215	M028*	M308	M766	MD16	ML83	MM56	MW02	N278	N463*	4W28
A023	A075	A130	A260	C791	F739	G216	M031*	M500	M842	MF60	MM24	MM57	MW19	N285	N464*	4W29
A024	A080	A131	A362	C870*	F762	G217	M092	M627	M845	MG39	MM51	MM58	MW29	N286	N659	
A059	A086	A136	A363	D003*	F810	G382	M095	M643	M862	MG40	MM52	MM91	MW37	N289	XW70	

AMMUNITION GROUP CC

A005	A059	A080	A130	A191	AW29	E892	G215	K301	M627	M842	MF60	MM92	MW56	XW70		
A011	A063	A086	A131	A260	AX11	E893	G216	M028*	M643	M845	MG39	MM93	MW80	XW77		
A014	A064	A102	A136	A362	AX14	EW76	G217	M031*	M644	M862	MG40	MT23	MW86	XW78		
A017	A068	A106	A140	A363	DOO3*	FW92	G382	M193	M648	M905	MG61	MW02	N289	XW79		
A023	A071	A111	A165	A400	E488	G213	HY71	M308	M670	MD15	ML03	MW19	N463*	4W28		
A024	A075	A112	A171	A475	E510	G214	K295	M500	M766	MD16	MM91	MW37	N464*	4W29		

Refer to NAVSEA SW020-AF-SAF-010, Trans and Storage for Ammunition, Explosives, and Related Hazardous Materials for specific NALC/DODIC Descriptions

AMMUNITION GROUP DD																
D003*	M029	M420	M591	M976	M984	ML04	ML12	ML17	MM26	MM34	MM41	MM46	MM53	MU43	N463*	
M003*	M030	M421	M757	M977	M986	ML05	ML13	ML18	MM30	MM35	MM42	MM47	MM54	MW18	N464*	
M023	M031	M456	M791	M980	M995	ML09	ML14	ML19	MM31	MM38	MM43	MM48	MU40	MW52		
M024	M032	M457	M792	M981	M996	ML10	ML15	ML25	MM32	MM39	MM44	MM51	MU41	MW53		
M028*	M039	M485	M913	M982	M998	ML11	ML16	MM24	MM33	MM40	MM45	MM52	MU42	MW84		
AMMUNITION GROUP FF																
A005	A024	A071	A106	A136	A260	AX11	C479	G215*	G937	L441*	MD15*	MT23*	XW77			
A011	A059	A075	A111	A140	A362	B630	D528	G216*	H855	L585*	MD16*	MW19*	XW78			
A014	A063	A080	A112	A165	A363	B646	D550	G217*	H929	M193*	MG39*	MW80*	XW79			
A017	A064	A086	A130	A171	A400	C276	G213*	G382*	HY71	M643*	MG40*	MW86*	4W28*			
A023	A068	A102	A131	A191	A475	C477	G214*	G930	K867	M905*	MM93*	XW70*	4W29*			
AMMUNITION GROUP GG																
G900	M598															
INERT																
A135	DWBH	F415	FW25	H121	HW49	LW05	LY57	M475	M480	M487	MN12	N291	PN15	1W18		
A501	DWBI	F448	FW90	H122	J416	LW25	M002	M476	M481	M914	MN14	NW20	PV18	1W73		
A560	DWBJ	F763	G811	HW01	J434	LX11	M098	M477	M483	ML06	MW28	NW33	PV47			
A924	E973	F766	GW03	HW02	JW83	LY15	M165	M478	M484	MM30	MW49	PL93	XW38			
C484	F017	F780	GW90	HW43	L111	LY53	M474	M479	M486	MN11	MW85	PN16	XW71			

NALC'S ANNOTATED WITH AN * ARE COMPATABLE WITH SOME RESTRICTIONS, REFER TO NAVSEA OP 4 FOR DETAILS

THIS CHART IS BASED ON NAVSEA OP 4, TABLE 3-3 (CH-18) DTD 15 APRIL 1995

ANY DISCREPANCIES SHOULD BE IDENTIFIED TO THE APPROPRIATE AMPHIBIOUS GROUP COMBAT CARGO OFFICER

APPENDIX G

EMBARKATION REPORTING REQUIREMENTS

1. **General.** The purpose of this chapter is to focus on the standard operational embarkation reporting requirements less those associated with the management of LFORM or other munitions products. Ammunition related reports are addressed in Chapter V. The specific due dates for each report are not outlined due to geographic variances in requirements. The Combat Cargo Officer (CCO) should refer to the appropriate instruction for details relative to submission timelines. This is not an all inclusive list of embarkation reporting requirements. Additional reports required may vary.

2. **Pre-embarkation Reporting Requirements.** The following reports will be submitted in accordance with the embark milestones as delineated in the deployment Plan of Action and Milestones (POA&M):

a. Report name: **Naval Support Element Augmentation Message**
Purpose: Message identifies navy units required to perform tasks in support of amphib operations.
Responsibility: CATF/COMPHIBRON
Reference: Joint Pub 3-02.2

(1) Amplifying information. Prior to releasing the NSE Augmentation message, the PHIBRON CCO must solicit NSE lift requirements. This solicitation should be executed via a naval message to the commands who provide the elements comprising the NSE.

(2) Once all of the inputs have been received, they are validated against the assigned mission and the prescribed NSE lift footprint baseline as established by the respective COMPHIBGRU. The COMPHIBRON CCO then consolidates the inputs into a single naval message for release to interested commands. Figure G-1 provides a sample NSE Augmentation message.

b. Report name: **Organization for Embarkation and Assignment to Shipping (OEAS)**
Purpose: Provides the assignment of embarking landing force elements to designated shipping
Responsibility: Landing Force Commander
Reference: Joint Pub 3-02.2 (chapter 4, para 7a)

(1) This message is important in that it identifies the landing forces intent relative to assigning specific units/organizations to amphibious shipping.

(2) It also provides some initial planning information which will prove useful during the initial embarkation conference.

c. Report name: **Landing Craft Availability Table (LCAT)**
Purpose: Identify the quantity and type of landing craft to be embarked on each ship of the amphibious force
Responsibility: CATF/COMPHIBRON
Reference: NWP 22-3

(1) Normally the landing craft mix for an Amphibious Ready Group (ARG) is determined prior to E-180. This information is required so that COMNAVBEACHGRU can ensure that the appropriate training and crew workups are completed prior to deployment.

(2) Completion of the LCAT requires one additional variable and that is the specific landing craft hull numbers. The CATF/PHIBRON can determine this information through coordination with the BEACHGRU Detachment OIC. Figure G-2 provides a sample LCAT. When developing the LCAT, the CATF/ COMPHIBRON should ensure that coordination has been effected with the embarking landing force command element prior to releasing the message.

```
FM COMPHIBRON
TO TWO TWO MEU
INFO COMNAVSURFLANT NORFOLK VA//N3/N36//
COMPHIBGRU TWO//N36//
COMNAVBEACHGRU TWO
COMSPECWARGRU TWO
COMEODGRU TWO
COMHELTACWINGLANT NORFOLK VA//N3//
ACU TWO
ACU FOUR
BMU TWO
COMSPECBOATRON TWO
SEAL TEAM TWO
FLTSURGTEAM TWO
FLECOMPRON SIX
EODMU TWO
USS LEATHER NECK
USS DEVIL DOG
BT
UNCLAS//N04600//
MSGID/GENADMIN/COMPHIBRON TWO/0001/JAN//
SUBJ/LF6F 1-99 NAVAL SUPPORT ELEMENT (NSE) AUGMENTATION LIFT DATA//
REF/A/RMG/COMPHIBGRU TWO/112237ZMAR97//
REF/B/DOC/JOINT PUB 3-02.2/DATE//
NARR/REF A IS JOINT DOCTRINE ON AMPHIBIOUS EMBARKATION. REF B IS APPROVED BASELINE NSE
LIFT FOOTPRINT FOR MARG/LF6F DEPLOYMENTS. //
POC/JONES/GYSGT/COMPHIBRON TWO/-/TEL:DSN:123-4567//
RMKS/1.  IN ACCORDANCE WITH REFS A AND B, THE FOLLOWING NSE AUGMENTATION LIFT DATA IS
PROVIDED FOR LF6F 1-99.
A.  NSE GRAND TOTALS
                     OFF  E7-E9  E1-E6   TOT CUFT   TOT SQFT   TOTAL WT
(NOTE: THE FIGURES REFLECTED IN THIS SUBPARAGRAPH ARE THE SUM TOTALS OF EACH OF THE
INDIVIDUAL NSE TOTALS)
B. USS LEATHER NECK
   (1) CPR STAFF
       OFFICERS   E7-E9   E1-E6   TOTAL CU   TOTAL SQ   TOTAL WT
      (A) SQFT REQUIREMENT
NOMENCLATURE   QTY   LENGTH   WIDTH   HEIGHT   SQUARE   TOTAL SQ   TOTAL WT
      (B) CUFT REQUIREMENT
NOMENCLATURE   QTY   LENGTH   WIDTH   HEIGHT   CUBE     TOTAL CU   TOTAL WT
   (2) COMNAVBEACHGRU TWO
       OFFICERS   E7-E9   E1-E6   TOTAL CU   TOTAL SQ   TOTAL WT
      (A) SQFT REQUIREMENT
NOMENCLATURE   QTY   LENGTH   WIDTH   HEIGHT   SQUARE   TOTAL SQ   TOTAL WT
      (B) CUFT REQUIREMENT
NOMENCLATURE   QTY   LENGTH   WIDTH   HEIGHT   CUBE     TOTAL CU   TOTAL WT//
C. USS DEVIL DOG
BT
(NOTE: CONTINUE TO LIST NSE UNITS, BY SHIP, WITH THEIR ASSOCIATED PERSONNEL, SQUARE, AND
CUBIC FOOT STOWAGE REQUIREMENT. ENSURE APPROPRIATE COMMENTS ARE INCLUDED RELATIVE TO NSE
LANDING FORCE SPACE BERTHING REQUIREMENTS. ENSURE ALL HAZMAT, MUNITIONS, AND OTHER
HOLD/TROOP STOW CARGO ITEMS ARE PROPERLY IDENTIFIED.
```

Figure G-1, NSE Augmentation Message

```
FM COMPHIBRON
TO TWO TWO MEU
INFO COMNAVSURFLANT NORFOLK VA//N3/N36//
COMPHIBGRU TWO//N36//
COMNAVBEACHGRU TWO
ACU TWO
ACU FOUR
BMU TWO
USS LEATHER NECK
USS DEVIL DOG
USS WAR SHIP
BT
UNCLAS//N03100//
MSGID/GENADMIN/COMPHIBRON TWO/0001/JAN//
SUBJ/LF6F 1-99 LANDING CRAFT AVAILABILITY TABLE (LCAT)//
REF/A/DOC/NWP 22-3/DATE//
NARR/REF A IS NAVAL WARFARE PUBLICATION ON SHIP TO SHORE MOVEMENT./ //
POC/JONES/GYSGT/COMPHIBRON TWO/-/TEL:DSN:123-4567//
RMKS/1.  IN ACCORDANCE WITH REF A, THE FOLLOWING LCAT IS PROVIDED.
    A.  USS LEATHER NECK: LCAC-20, LCAC-22, LCAC-24
    B.  USS DEVIL DOG: LCU-1640
    C.  USS WAR SHIP: LCU-1657, LARC-55, LARC-56//
```

Figure G-2, Landing Craft Availability Table

d. Report name: **Berthing and Loading Schedule (BALS)**
Purpose: A coordinated CATF/Commander Landing Force (CLF) message outlining the planned sequence of events relative to onloading the landing force, to include the Naval Support Element (NSE), at all designated loading sites as required.
Responsibility: CATF/COMPHIBRON
Reference: Joint Pub 3-02.2

(1) The BALS is one of the most important documents the CATF/PHIBRON CCO will produce relative to onload execution. It is normally published after the Final Embarkation Conference and after the landing force has released its Embarkation LOI. The BALS should fully support the Embarkation LOI.

(2) Figure G-3 provides a sample BALS. There are a few key points which must be kept in mind when preparing this document for release. The first point to remember is that you can never provide too much detail. The identification of onload support equipment (e.g., forklifts, cranes), numbers of personnel, quantities of pallets, pieces of rolling stock, and onload means (e.g., cranes, ramps, landing craft) should be provided when known. Equally important is the onload site, methodology, and personnel involved. If you reasonably expect that cargo, supplies, and equipment will be loaded in the homeport of a ship then you need to clearly define this event. Including the Plain Language addresses of support personnel at the Naval Station Norfolk/San Diego, NAB Little Creek, etc. will ensure that the desired onload support is ready to execute the onload plan.

(3) Secondly, is the need to validate the BALS ship schedules with the events listed in the Commander, Amphibious Task Force (ATF)/PHIBRON Schedule of Events (SOE). This is best accomplished through consultation with the ATF N-3 to ensure the two documents align. The CCO should also compare the BALS with the Logistics Request (LOQREQ) generated by the N-4 to ensure these documents are mutually supporting.

(4) Finally, conduct follow up phone calls with the appropriate supporting agencies at the ports of emabrkation to ensure they received the message and understand the level of support required.

e. Report name: **Ship Load Plans**
Purpose: Provides the detailed embarkation data required to safely and efficiently load an amphibious ship. Please refer to paragraph 5 of this chapter for additional information.
Responsibility: **Commanding Officer of Troops**
Reference: Joint Pub 3-02.2

(1) The preparation of detailed load plans is the sole responsibility of the CO of Troops and the designated Team Embarkation Officer. However, they can not prepare these load plans in isolation. The ship's Combat Cargo Officer/First Lieutenant must be an active participant in this process. Participation must include the exchange of automated systems electronic exports from approved logistics automated information management systems. This "ship's" data must include all data relative to embarked LFORM, MLA, EOD/SPECWAR/Ships fill munitions products, forklifts, aviation ground support equipment, IMRL, AVCAL, and any other commodity or cargo stowed or planned for stowage in landing force spaces. This includes materials stowed or planned for stowage on the flight deck or hangar deck.

(2) The ship's Combat Cargo Officer/First Lieutenant should also engage other shipboard Departments during the load plan analysis phase and prior to the load plans submission to the ship's Commanding Officer for his review and signature. The ship's company personnel who must also have an opportunity to review/comment on the load plan includes the Chief Engineer, Damage Control Assistant, Air Boss, First Lieutenant, Ship's Bos'n, and Executive Officer. Other personnel may be required to review the load plan based on ship specific requirements.

f. Report name: **LFORM Supplement**
Purpose: Provides munitions stowage diagrams and manifests for LFORM, MLA, SPECWAR, EOD and shipfill class V cargo when stowed in SLCP designated stowage locations.
Responsibility: **Each amphibious ship**
Reference: COMNAVSURFLANTINST 4080.1/MARFORLANTO 4000.10
COMNAVSURFPACINST 4080.1/MARFARPACO 4080.2

(1) The LFORM Supplement will be developed using currently fielded automated systems. The LFORM Supplement development must begin through the construction of a database and include all munitions products (e.g. LFORM, MLA, EOD, SPECWAR, Shipsfill, etc.) stored in ships magazines and other designated stowage locations. This database will also be used to document the data relative to AGSE, IMRL, MHE/CHE, and other materials stored in the designated landing force storage areas to include the Hangar and Flight Deck.

(2) The database will be used to support the ship load planning process. Once the load planning process is complete, a copy of the electronic export file and a hard copy of the actual LFORM Supplement will be provided to the respective COMPHIBGRU. Additionally, this same information will be provided to the Amphibious Squadron and embarking landing force elements. This will provide the landing force with the necessary information to prepare a detailed ship's load plan by merging data on landing force personnel, supplies, and equipment with the data contained in the LFORM Supplement.

```
FM COMKSGARG
TO TWO SIX MEU//S3/S4//
KSGARG
INFO COMMARFORLANT//G-3/G-4/SMO//
COMNAVSURFLANT NORFOLK VA//N3/N36//
COMNAVAIRLANT NORFOLK VA//N41//
COMPHIBGRU TWO//N3/N36//
LIST EACH NSE DET AND THEIR PARENT COMMAND
LIST OTHER SUPPORTING AGENCIES/COMMANDS AS REQUIRED
BT
UNCLAS  //N04600//
MSGID/GENADMIN/CPR-2//
SUBJ/BERTHING AND LOADING SCHEDULE (BALS) ISO LF6F/MARG 99-2//
REF/A/DOC/JOINT PUB 3-02.2//
REF/B/CONF/CPR2/21FEB99//
NARR/REF A IS JOINT DOCTRINE PUB FOR AMPHIB EMB. REF B WAS LF6F/MARG 99-2 FINAL
EMBARK PLANNING CONF (FEPC).//
POC/I M INCHARGE/CAPT/CCO/TEL: (COMM) 757-444-4974/(DSN) 564-4974/
RMKS/1. PER REFS (A) AND (B), SKED BELOW PROVIDES BALS FOR EMBARK OF 26 MEU.
2. SHIPS WILL MAKE PCVT RPTS HOURLY VIA PCS COORD NET TO PCS ON 15 APR 99
FROM ONLOAD COMMENCEMENT TO COMPLETION.
3. SKED AS FOLLOWS (READ IN THREE COLUMNS):
*****************************USS DEVIL DOG*************************************
DATE/TIME                 EVENT                                   PLACE
24MAR99/0800-COMP       26 MEU SUPPLY BLOCK/MAP                   PIER 12/NAVSTA
                        PACKAGE ARR NAVSTA NORFOLK
25MAR99/0800-COMP       LOAD 26 MEU SUPPLY BLOCK/                 PIER 12/NAVSTA
                        MAP PACKAGE
12APR99/1600            26 MEU ADVANCE PARTY ARRIVE               PIER 12/NAVSTA
                        (APPROX 60 PERS)
13APR99/0900-1100       TROOP STOW CARGO ARRIVE                   PIER 12/NAVSTA
                        (APPROX 30 PALLETS)
       /1200-1700       26 MEU MAIN BODY ARRIVE (APPROX 850 PAXS) PIER 12/NAVSTA
14APR99/0700            EMBARK EOD HMMWV PIERSIDE                 PIER 12/NAVSTA
       /0730            CCA ENROUTE CAMLEJ                        PIER 12/NAVSTA
       /0800-1100       26 MEU PRE-STAGE VEH/EQUIP                RISLEY PIER/CAMLEJ
       /0900            UNDERWAY                                  PIER 12/NAVSTA
       /TBD             EMBARK LCAC 28/37/89 W/BMU                VIC LYNNHAVEN ANCH
                        CLZ HMMWV AND PTM
       /1200            EMBARK SAR DET                            UNDERWAY
       /1230            ACE FLY-ON (HARRIERS)                     UNDERWAY
       /1300-COMP       CCA CONDUCT PRE-EMBARK VEH/EQUIP INSP     RISLEY PIER/CAMLEJ
15APR99/0630            ARRIVE CAMLEJ OPAREA                      ONSLOW BAY
       /0700            LAUNCH LCAC'S/OFFLOAD BMU CLZ HMMWV       ONSLOW BAY/BEACH
       /0800            COMMENCE VEHICLE ONLOAD (15 LCAC LOADS)   ONSLOW BAY/BEACH
       /TBD             ACE FLY-ON (PERS)                         ONSLOW BAY/BEACH
       /TBD             RECOVER PREBOAT LCAC'S                    ONSLOW BAY/BEACH
*****************************USS WAR SHIP**************************************
DATE/TIME                 EVENT                                   PLACE
25MAR99/0800-COMP       LOAD 26 MEU SUPPLY BLOCK                  PIER 16/NAB
12APR99/1200-1300       26 MEU ADV PARTY ARRIVE (APPROX 20 PAXS)  PIER 16/NAB
14APR99/0730            BOS'N ENROUTE CAMLEJ                      PIER 12/NAVSTA
       /0800-1100       26 MEU PRE-STAGE VEH/EQUIP                MHC/RISLEY PIER
       /0900            UNDERWAY                                  PIER 16/NAB
       /TBD             EMBARK LCAC 36/70 W/BMU                   VIC LYNNHAVEN ANCH
                        5-TON/HMMWV/TRLR
       /1300-COMP       BOS'N CONDUCT PRE-EMBARK VEH/EQUIP INSP   MHC/CAMLEJ
15APR99/TBD             LAUNCH LCAC'S ENROUTE CAMLEJ              VIC MHC ONSLOW BCH
       /0700            ARRIVE MHC PORT                           MHC/BERTH 9 (STERN TO)
       /0745            RO/RO RAMP IN PLACE                       MHC/BERTH 9
       /0800            LOAD TROOPS PIERSIDE (APPROX 225 PAXS)    MHC/BERTH 9
       /0830            COMMENCE VEHICLE ONLOAD                   MHC/BERTH 9
       /1000            ONLOAD 12 PALS TROOP STOW CARGO           MHC/BERTH 9
       /1300-1400       U/W MHC ENROUTE CAMLEJ OPAREA             MHC/BERTH 9
       /TBD             ARR CAMLEJ OPAREA                         ONSLOW BAY/BEACH
       /TBD             EMBARK M9 ACE/EXCAVATOR VIA LCAC          ONSLOW BEACH
       /TBD             RECOVER AAV'S                             ONSLOW BEACH
       /TBD             RECOVER PREBOAT LCAC'S                    ONSLOW BAY/BEACH//
```

Figure G-3, Berthing and Loading Schedule

g. Report name: **Shipboard Landing Force Accommodations Inspection or Shipboard Inspection Summary Reports**

Purpose: The CO of Troops accompanied by the ships CO, or their designated representatives, will conduct a joint pre-embark and debark landing force accommodations inspection to ensure habitability standards are being maintained and to accurately identify and assess damages.

Responsibility: **Commanding Officer of Troops/Ships Commanding Officer**

Reference: COMNAVSURFLANTINST 3000.3/MARFORLANTO 4620.2

(1) Amplifying information. Pre-embarkation and Debarkation Shipboard Accommodations Inspections or Shipboard Inspection Summary's are required to advise the chain of command on the status of habitability in troop living compartments, the condition and state of maintenance of troop office/functional spaces and material handling equipment. Amphibious warfare ships by necessity are restricted in the facilities that can be provided for the comfort and convenience of embarked troops. Problems arising due to ship space constraints and/or facilities limitations should normally be resolved within limits at the final embarkation conference. Those that persist during ship deployments may be beyond the capability of the ship to correct and will be so noted on the reports.

(2) The inspection of landing force spaces should be conducted in sufficient detail to document potential damage claims, which may arise. (The report should state that both the Navy and Marine Corps parties agree with the discrepancies noted.) In those circumstances when an agreement as to funding responsibility cannot be reached at the unit level, detailed reports will be forwarded via each unit's chain of command for resolution at the Immediate Superior in Charge (ISIC) or Type Commander (TYCOM) level.

(3) The reports should not be limited to a summary of adverse conditions that exist. A great effort has been put forth by the crew to make conditions as habitable and workable as possible. These efforts should be noted with appropriate comments in the inspection results.

(4) Accommodation Inspection results are prepared by the CO of Troops within five days of completion of embarkation and immediately prior to debarkation with the following exceptions:

(a) When the period of embarkation is for less than 14 days, only the Debarkation Shipboard Accommodations Inspection will be submitted. The only exception to this rule is if the shipboard conditions are so adverse that a Pre-Embarkation Shipboard Accommodations Inspection is warranted.

(b) When troop units debark for conduct of operations ashore (and will re-embark) and members of the unit remain aboard for security and housekeeping chores.

(5) Prior to the submission of a Pre-embark or Debark Shipboard Accommodations Inspection results, the Commanding Officer of Troops and the ship's Commanding Officer must consult. It is imperative that differences which may exist between the two commanders and their respective commands be mutually resolved at their level whenever possible.

(6) Immediately prior to debarkation (normally 2-3 days prior to offload for extended deployments), the Commanding Officer of Troops (COT), accompanied by the Commanding Officer of the ship, or their designated representatives, will conduct a Debarkation Accommodations Inspection. It is imperative the COT conducts a thorough inspection with the ship's representatives present and properly identifies discrepancies utilizing the same inspection checklists that were annotated during the Pre-Embarkation Shipboard Accommodations Inspection. The COT and the ship's Supply Officer will determine funding responsibility and will prepare a letter of agreement signed by both the COT and the ship's Commanding Officer. The letter will be prepared prior to the COT's departure and will contain the dollar amount of required repairs and the agency responsible for paying for the repairs. This letter states that both the ship and the landing force concur with the dollar value of assessed damages and allows for restitution to be made by the identified responsible agency. Omitting this information from the debarkation inspection results impedes the timely processing and preparation of command endorsements.

h. Report name: **Landing Force Operational Reserve Material (LFORM) Shortfall/Ammunition Shortfall Message**
Purpose: Report identifies all Class V munitions shortfalls.
Responsibility: **Each amphibious ship**
Reference: COMNAVSURFLANTINST 4080.1/MARFORLANTO 4000.10
COMNAVSURFPACINST 4080.1/MARFORPAC 4080.2

(1) Detailed ammunition reporting procedures are outlined in Chapter V.

(2) Combat cargo should be an active part of the ammunition reporting process. Doing so provides the ship's Commanding Officer with a system of checks and balances. It is also an integral part of combat cargo's LFORM manager duties.

3. **Post-Embarkation Reporting Requirements.** The following reports are submitted concurrent with or after the landing force has been embarked.

a. Report name: **Embarked Personnel and Material Report**
Purpose: Provides a concise manifest outlining, by unit or organization, the personnel, supplies and equipment embarked aboard a ship.
Responsibility: Each amphibious ship
Reference: COMNAVSURFLANTINST 3000.3/MARFORLANTO 4620.2
COMNAVSURFPACINST 4621.1A

b. Report name: **LFORM Inspection Report**
Purpose: Validate the overall general condition of embarked LFORM/MLA
Responsibility: Commanding Officer of Troops
Reference: COMNAVSURFLANTINST 4080.1/MARFORLANTO 4000.10
COMNAVSURFPACINST 4080.1/MARFORPAC 4080.2

(1) Current policy states that the LFORM Inspection Report <u>is submitted only if discrepancies exist</u>.

(2) The Commanding Officer of Troops must conduct the inspection to determine the overall condition of embarked LFORM/MLA. This inspection is not intended as a mechanism for the conduct of a wall-to-wall inspection. The COT is merely inspecting the magazines and general cargo storage areas where LFORM/MLA products are stowed to assess overall material condition of the LFORM/MLA, cleanliness of the spaces, to ensure the materials are properly secured for sea, and to get a first-hand view of accessibility constraints.

4. **Annual Reporting Requirements**. The only existing annual reporting requirement is the SLCP Validation Report. The purpose of this report is to validate the current date of the SLCP, Troop Regulations and any changes to these documents. It is also used to ensure that the SLCP's conform to established periodicity requirements and the precribed format. Refer to COMNAVSURFLANTINST 9010.2/COMNAVSURFPACINST 9010.1 for additional information.

a. Normally, the PHIBGRU CCO will release a naval message during the first week of July each year reminding ship's of the reporting requirement. This message will also identify a due date for the submission of the report and delineate the reporting format.

b. Once all of the ship's inputs have been received, the PHIBGRU CCO will consolidate the inputs and send a naval message to the standard SLCP distribution list informing commands of the results of the validation process. The timely submission of reports by individual ships is crucial to the timely dissemination of this information and in satisfying the SURFPAC/LANT mandated requirement.

5. **Ship's Load Plans**. The landing force is responsible for the preparation and presentation of detailed load plans each time landing force elements are embarked aboard amphibious shipping.

a. Load plans for deployments/training exercises 13 days or less in duration will consist of:

(1) The load plan cover page signed/approved by both the Commanding Officer of Troops and the ships Commanding Officer.

(2) Deck diagrams for each hold, level, and stowage location. This includes all vehicle or cargo stowage areas, flight deck, hangar deck, well deck, superdeck, and other landing force designated or landing force/ships common use spaces identified in the SLCP.

(3) Part I to the Personnel Supplies and Equipment Report (PS&ER) in order to accurately identify the numbers of embarking personnel by unit/organization.

(4) Printed copies of the standard amphibious reports (UP&TT/Cargo Manifest/PS&ER Part II) will be provided to the ship upon request. At a minimum, the Team Embarkation Officer (TEO) should provide a LOGAIS generated electronic export (.pex) file containing the ships data and load plans. This file will allow combat cargo personnel to generate additional Ad Hoc, Query, and Standard Reports required to satisfy shipboard planning requirements.

b. Detailed ship's load plans for deployments or training exercises which are 14 days or greater in duration will consist of:

(1) The load plan cover page signed/approved by both the Commanding Officer of Troops and the ships Commanding Officer.

(2) A Unit Personnel and Tonnage Table (UP&TT) Report.

(3) Deck diagrams for each hold, level, and stowage location. This includes all vehicle or cargo stowage areas, flight deck, hangar deck, well deck, superdeck, and other landing force designated or landing force/ships common use spaces identified in the SLCP.

(4) A Ships Cargo Manifest (SCM) for each space having a deck diagram as well as any other space where landing force equipment or supplies are planned for storage; this includes spaces having UP&TT line number 4 (Troop Stow Cargo). Additional information relative to proper load plan development, preparation, and assembly can be found in Joint Pub 3-02.2.

(5) A LOGAIS generated electronic export (.pex) file containing the ships data and load plans. This file will allow combat cargo personnel to generate additional Ad Hoc, Query, and Standard Reports required to satisfy shipboard planning requirements.

c. Load plans must be submitted to the ships Commanding Officer for review and approval no later than 13 days prior to the execution of loading. Distribution of the signed final load plans is the responsibility of the Team Embarkation Officer. Combat cargo personnel should ensure that distribution includes COMNAVSURFPAC (N41)/LANT (N36), and COMPHIBGRU ONE/TWO (N36)/THREE (N513).

d. All load plan deck diagrams and standard amphibious reports (UP&TT/Cargo Manifest) will be prepared using currently fielded LOGAIS.

e. It is important to note that the Combat Cargo Officer is responsible for ensuring that the detailed load plan includes ship's MHE/CHE, LFORM/ MLA/ EOD/ SPECWAR/Shipfill and other munitions products stored in ship's magazines, AVCAL/IMRL, and AGSE which may be stored in landing force spaces or on the Flight/Hangar Deck.

APPENDIX H

U.S. CUSTOMS AND AGRICULTURAL WASHDOWNS

1. **General.** The purpose of this appendix is to provide information on the conduct and reporting requirements for U.S Customs and agricultural washdowns prior to returning to CONUS. This appendix is not intended to be an all encompassing source document, but rather to provide guidance that will prove beneficial in conducting the planning and preparation for return to CONUS.

2. **U.S. Customs**. When a naval vessel ship departs U.S. territorial waters, DOD requires that each individual embarked on that vessel complete a Customs Declaration Form DD-1854 (in duplicate). Additionally a thorough inspection of every shipboard space must be performed to verify that no contraband or undeclared items are on the ship. A review of JAG INST 5800.7C, chapter 11 and DOD Instruction 5030.49R should be made prior to developing and promulgating the ship's or ARG's U.S. Customs guidance. The following procedures are provided to assist personnel in understanding U.S. Customs Service requirements.

a. Each ship should have a minimum of two personnel who are school trained Military Customs Inspectors. Normally ship's Master-At-Arms personnel perform this function. Embarked landing force personnel are responsible for providing their own trained/qualified personnel.

b. The ship is required to maintain enough blank copies of the Customs Declaration Form (DD Form-1854) to provide two copies for each member of the ship's company and the embarked landing force. Advance coordination with the ship's Master-At-Arms Office should be made to ensure that ample quantities are being maintained.

c. A thorough ship-wide inspection must also be accomplished. Inspectors should be looking for those items that are restricted or prohibited. Figure H-1 is provided as a template for determining restricted, prohibited or controlled items.

d. Preparations for conducting or effecting U.S. Customs declarations and inspections should be based on overarching procedures/guidance provided by the ARG commander. Once this document is promulgated, each ship is responsible for publishing a ship's notice or bulletin that directs the Department Heads and embarked landing force commanders with very specific actions. It is imperative that ships engage the Commanding Officer of Troops and his staff in the development of the notice/bulletin and in the execution of the actual inspection.

e. Once the individual has completed all customs forms, they must be reviewed, stamped, and segregated by the Military Customs Inspectors. Once these actions are complete the Customs forms are normally hand carried by a designated ATF/LF customs representative to the U.S. Customs representatives in the CONUS Port of Entry. This requires the designated customs representatives to return to CONUS from the ship's last overseas port. The delivery of these forms should be accomplished prior to the ships return to CONUS to expedite U.S. Customs clearance. Customs personnel will normally identify the assessed fees in two categories; one for the Navy and one for the embarked landing force. The ship's Supply Officer normally prepares a single U.S. Treasury check for the sum of both of these categories and presents the check to the Customs Agent upon arrival at the first CONUS Port of Entry. It is up to the ship to coordinate with the landing force Supply Officer for reimbursement of landing force assessed fees.

f. Prior to the ship's return to CONUS, the U.S. Customs Agents will provide the ship a by-name roster which indicates each individuals assessed customs duty so that the ship and landing force can conduct their own independent collections efforts prior to the ship's arrival. The Customs Agent will also be seeking a formal Vessel Declaration letter from the ship, signed by the Commanding Officer, which states the ship-wide inspection was completed and that no restricted or prohibited items are on board. Any delays in presenting the check or Vessel Declaration letter will delay the execution of the offload.

Restricted	Alcohol	No more than 4 liters, three of U.S. Manufacture, one of foreign can be brought into the U.S. duty free. Alcohol in excess of these amounts is authorized, but subject to taxation.
	Tobacco	No more than 100 cigars and 10 cartons of cigarettes.
Prohibited	Drugs, narcotics, or controlled substances that are not prescribed by a physician.	
	All articles originating in Cambodia, Cuba, Vietnam, North Korea, or Rhodesia.	
	Switchblade knives	
	Plants, plant products, fruits or vegetables	
	Pornographic or obscene material	
	Lottery Tickets	
	Printed matter advocating insurrection or treason toward the U.S.	
Controlled	Firearms	These items are allowed, but only with the written approval from the ARG Commander and ship's Commanding Officer.
	Ammunition	

Figure H-1, Restricted, Prohibited, and Controlled Items

g. The role of combat cargo in this process is as a facilitator. It is very important that both the ship and the Commanding Officer of Troops understand the requirement to have at least two trained Military Customs inspectors prior to the actual deployment. This is the type of issue that must be repeatedly addressed during each of the pre-deployment planning meetings and conference wrap-up messages. Combat cargo must also ensure that all parties agree to the inspection policies and procedures. This is best accomplished through a joint meeting where a ships notice or bulletin is developed and promulgated.

3. **Agricultural Washdown Operations**. Special precautions are necessary to prevent the introduction of harmful public health or agricultural agents from entering the United States on military equipment. SECNAVINST 6250.2 describes DOD support for the U.S. Public Health Service and the USDA to prevent such introductions. This reference prohibits backloading of vehicles and cargo in a foreign country unless they are free of animal, pest, and soil contamination.

a. It is imperative to highlight the importance of retrograde washdown operations and delineate the cleaning and inspection procedures required to minimize the introduction of foreign contaminants.

b. Detailed attention and logistical forethought must be given to the issue of washdown supply procurement and receipt. This can be a "show-stopper" for both the landing force and the ship. Sufficient quantities or cleaning solvents, brooms, rags, brushes, wet-n-dry-vacuums, high pressure hoses and other cleaning materials must be available prior to the actual execution of the washdown operations. A joint approach for the development of washdown letters of instruction (LOI) is highly recommended. Such plans should provide the purpose, sequence of events, and include a detailed assignment of responsibilities for all parties involved. Once the plan is developed its details must be presented in a forum where all ship's Department Heads, required Division Officers, and embarked landing force unit commanders are required to attend. Another useful tool for disseminating information relative to the planned washdown operations is through the use of Plan of the Day (POD) notes or the the ship's Closed Circuit Television (CCTV) system, if available.

c. Agricultural washdown operations also require documentation. The Commanding Officer of Troops must provide the ship's Commanding Officer with a detailed list of non-contaminated supplies and equipment. This list should be in the form of an official letter and identify, by compartment number, the box

number, vehicle serial number or other identifying number for the non-contaminated items. This letter forms the basis for the preparation of a joint “Certification of Non-Contaminated Spaces/Cargo” letter to the Medical Entomologist. The Medical Entomologist will be conducting the Agricultural Inspection on behalf of the U.S. Department of Agriculture (USDA). The ship must also identify ship specific spaces and equipment which are included in the non-contaminated spaces/cargo letter. Figure H-2 is provided as a sample letter. A copy of this letter must be retained and presented to USDA officials at the CONUS port of entry as part of the clearance process.

d. Once the agricultural inspection is complete, the senior Medical Entomologist will present the ship with a letter indicating compliance with USDA inspection and entry requirements. This letter, accompanied by the non-contaminated spaces/cargo letter must be presented to the USDA officials who will embark the ship at its first CONUS entry point. Figure H-3 provides a sample compliance letter. It is important that all commanders understand that the USDA will not board a vessel that is anchored outside of a port. The inspectors will only board the ship if it moors pierside. The other point that must be remembered is that a copy of the letters must be made available in order to conduct the discharge of cargo, supplies, and equipment; even if the ship does not moor pierside. This requirement is driven by the need to validate compliance with washdown requirements. Advance coordination with USDA and Medical Entomologist personnel must occur prior to deployment and continue through the planning and execution processes.

e. Typically the ship’s Combat Cargo Officer will be charged with the responsibility of overseeing and coordinating shipboard washdown preparations and execution.

4000
Ser:
Date

From: Commanding Officer, USS DEVIL DOG (LHX 1)
Commanding Officer of Troops, USS DEVIL DOG (LHX 1)
To: Senior Medical Entomologist, 2d Medical Battalion, 2d Force Service Support Group, PSC 20129, Camp Lejeune, NC 28542-0129

Subj: CERTIFICATION OF NON-CONTAMINATED SPACES/CARGO

Ref: (a) Insert appropriate reference

Encl: (1) Commanding Officer of Troops ltr 4620 COT dtd 1 Jun 99
(This letter should provide a detailed listing of all landing force supplies and equipment, by stowage location/serial and box number, which should be considered as non-contaminated.)

1. Per reference (a) and as supported by enclosure (1), the following list of non-contaminated spaces/cargo aboard USS DEVIL DOG (LHX 1) is submitted.

SPACE/CARGO	COMPARTMENT
Second Platform: Ammunition/Cargo	Holds Upper 4 and Upper 5
Inner Bottom: Ammunition/Cargo	Holds Lower 4 and Lower 5
Second Platform: Ammunition	Holds 9 and 10
Small Arms Magazine: Ammunition	6-47-0-M
Fuze Magazine: Ammunition	6-47-4-M
Thermite Grenade Lockers	02 Level Starboard

Upper Vehicle Stowage: 28 QUADCONs, (3) 20-foot Shelters, 35 pallets, and 74 miscellaneous boxes (forward of hinged ramp).
Lower Vehicle Stowage: 165 miscellaneous size boxes and 150 pallets (portside aft)
Hangar/Flight Deck: All aviation support equipment and material handling equipment located on the Hangar and Flight Decks

2. The command point of contacts are Captain I. M. Washing, CCO, USS DEVIL DOG (LHX 1) and Captain I. B. Cleaning, Team Embarkation Officer, 22nd Marine Expeditionary Unit.

R. U. SAILOR
Commanding Officer
USS DEVIL DOG (LHX 1)

I. B. INCHARGE
Commanding Officer of Troops
USS DEVIL DOG (LHX 1)

Copy to:
COMNAVSURFLANT/PAC
COMMARFORLANT/PAC (G-4/SMO)
LANTNAVFACENGCOM (10A)
CG, ___ FSSG (G-3)
COMPHIBRON
___ MEU
COT, USS DEVIL DOG (LHX 1)

Figure H-2, Non-Contaminated Spaces/Cargo Certification Letter

6250
PM
Date

From: Senior Medical Entomologist, __ Medical Battalion, __ Force
Service Support Group, (insert remainder of command address)
To: Commanding Officer, USS DEVIL DOG (LHX 1)

Subj: AGRICULTURAL WASHDOWN OF USS DEVIL DOG (LHX 1)

Ref: (a) Insert appropriate reference

1. An agricultural washdown has been completed on ___ MEU per reference (a). Each piece of rolling stock, airframe, and all storage areas aboard USS DEVIL DOG (LHX 1) have been certified and found to meet U.S. entrance requirements in accordance with published U.S. Department of Agriculture bylaws.

2. The agricultural washdown was completed at (insert washdown location, e.g., NAVSTA Rota, Spain) on (date). A three-member Preventive Medicine Team from Camp Lejeune, NC served as reviewing inspectors prior to each vehicle or aircraft certification.

3. The point of contact for questions regarding this washdown is LT Gritgetter or HMC Soapsuds at (910) 451-5707 or DSN 751-5707.

I. M. GRITGETTER
LT, MSC, USNR

Copy to:
USDA, Morehead City, NC
COMPHIBRON
MEU
COT, USS DEVIL DOG (LHX 1)

Figure H-3, Agricultural Inspection Compliance Letter

APPENDIX I

WELL DECK COMBAT CARGO OPERATIONS

1. **General**. This chapter outlines cargo handling procedures and the cargo handling personnel qualifications for vehicle and well deck operations. All vehicle/well deck operations shall be conducted in accordance with Joint Pub 3-02.2 “Joint Doctrine for Amphibious Embarkation.” The success of embarkation and debarkation evolutions involving landing craft aboard an amphibious ship is dependent on close coordination between Combat Cargo personnel, the ship's Deck Department, and embarked landing force elements.

2. **CCO/CCA Duties and Responsibilities.** The ship's Combat Cargo Officer is responsible for the safe and orderly flow of all vehicles, cargo and personnel in both operational and administrative phases of shipboard Well Deck operations. This includes mail and other miscellaneous cargo that arrives or departs via the Well Deck. The duties normally associated with this responsibility include the following:

a. Compile a complete passenger manifest for all personnel arriving or departing in an administrative or tactical status that includes at least the following information: (Note: Preparation of passenger manifests for tactical movements is the responsibility of the moving unit.)

(1) Last name and initials

(2) Rank/rate

(3) Social security number

(4) Organization

(5) Destination

(6) Blood type

b. Conduct troop/passenger pre-embark briefings to include:

(1) Well Deck precautions.

(2) Primary routes to landing craft.

(3) Personal survival equipment and its use.

(4) Landing craft emergency egress stations.

c. Conduct a foreign object damage (FOD) check to ensure that when passengers transit the Vehicle/Well Deck they do not create a potential hazard, and are escorted by trained guides.

d. Ensure passengers are provided with approved head/hearing protection and floatation devices from the landing craft they are to board. Eye protection should also be used, if required. All personal protective gear shall be properly donned by passengers prior to proceeding into the Well Deck except for the floatation device, which may be received on board the landing craft.

e. Be familiar with load capacities/restrictions, survival equipment carried, and emergency escape procedures for each type of landing craft.

f. Inspect cargo prior to loading to ensure it is unitized or palletized in accordance with existing instructions.

3. **Required 1 ALPHA Team/Ship's Platoon Training**. To ensure all personnel are qualified per current instructions and regulations, classes will be given by the Combat Cargo Assistant or appropriate Deck Department personnel on subjects that concern Well Deck operations that are unique to the amphibious ship in which embarked. Once a person has been fully indoctrinated and has the qualification checklist completely signed off by the Combat Cargo Officer and the Ship's Boatswain, they are considered trained and qualified for duties with the 1 Alpha Team/Ship's Platoon. The Combat Cargo Assistant will keep the completed checklist on file in the Combat Cargo Office.

4. **Embarking/Debarking Troops Via Landing Craft**. Ship's 1 Alpha/Ship's Platoon personnel should use the following standard procedures when embarking/debarking troops, vehicles, and cargo via landing craft. It is important to note that all Well Deck embark/debark evolutions must be conducted in accordance with the appropriate surface assault planning documents contained in the Landing Plan.

a. Special Considerations.

(1) Prior to the commencement of each evolution, ensure a serviceability check of all communication circuits and equipment designated for the embarkation/debarkation control stations is completed (EMCON permitting).

(2) Set up embark/debark status boards in accordance with latest operational landing plans prior to commencement of evolution.

(3) Conduct a meeting with key Well Deck control and 1 Alpha Team/Ship's Platoon personnel, prior to the commencement of any evolution, to ensure a complete understanding of the cooperation required to execute the Landing Plan.

b. Advance Planning and Preparation.

(1) Establish liaison with troop representatives to coordinate onload/offload and advance/rear party requirements.

(2) Obtain and distribute the surface assault employment and assault landing table, and serial assignment table.

(3) Brief all 1 Alpha Team/Ship's Platoon and appropriate Deck Department personnel on the upcoming evolution.

(4) Provide an embarkation/debarkation plan to all the Departments and key embarked organizations that emphasizes:

(a) Organization of ship for embarkation/debarkation evolution and individual duties of ship's personnel and supporting elements.

(b) Chain of command and command relations between embarkation/debarkation control stations, vehicle decks, hangar bay and Well Deck areas.

(c) Embarkation/debarkation communication requirements to include emergency communication procedures in the event of a communication casualty.

(5) Conduct a brief for all concerned personnel that addresses, at a minimum:

(a) General organization/composition of landing craft serials and the use of troop/passenger manifests.

(b) Duties of the team leader for each embarking/debarking serial.

(c) Adjustment of equipment (782 gear/individual or crew served weapons and backpacked field radio).

(d) Equipment stowage plan for hand/carry-on cargo organic to the unit which is essential to the mission.

(6) Establish status boards at all embarkation/debarkation control stations, (i.e., Debark Control, Well Deck Control) which contains the following:

(a) Serials.

(b) Landing craft waves.

(c) The actual craft number and serials embarked. (This is left blank until such time as the craft is actually loaded).

(d) Load information (i.e., number of troops, types of portable equipment, types of vehicles, and cargo etc.).

(e) Load time of serial (i.e., start and completion times).

(f) Destination (i.e., name of craft landing zone or beach, etc.).

(g) It is important that the status boards reflect an accurate record and status of the actual serials aboard all landing craft at any given time during embarkation/debarkation evolution.

c. Safety.

(1) Observe standard safety precautions as delineated in applicable ship's regulations..

(2) 1A/troop guides must obtain authorization from the Ramp Marshall before moving to or from any landing craft.

d. Procedures.

(1) The embarkation of assault troops via landing craft should be accomplished as follows:

(a) At all times for maximum safety, two 1A/troop guides will escort assault troops. There should be a 1A/troop guide leading the serial with another 1A/troop guide acting as trail man. The landing force serial will proceed single file whether embarking or debarking, directly to or from the landing craft.

(b) On orders from the Ramp Marshall, with authorization from the CCA, the lead 1A/troop guide along with the trail 1A/alpha troop guide, will approach the landing craft that has been designated for the load or requires unloading. Once on the ramp that leads to the Well Deck, the lead 1A/troop guide will signal the Loadmaster to ensure that the landing craft is ready to proceed with the load/unload.

(c) Once in the marshalling area and under the guidance of the 1 Alpha Supervisor, Well Deck CCA, and the ship's Weapons/Ordnance Officer, the senior troop representative will be directed to collect all unexpended ammunition. Troop leaders will follow standard procedures to ensure that all weapons are cleared, inspected and locked in a safe manner.

(d) Collected ammunition will be boxed, unitized or palletized and sealed. Markings or placards with the essential information of DODIC/NALC, quantities and owning unit will be affixed to each container.

(e) All collected ammunition will be properly stowed in designated ship's magazines once directed to do so by the Combat Cargo Officer.

(f) The landing force must provide the Combat Cargo Officer with 3 copies of an accurate manifest of all personnel that embark or debark a landing craft. This manifest should be provided 24-hours in advance of the scheduled movement. When debarking the ship via landing craft, the manifest will be validated against the names of the personnel actually present with last minute changes properly annotated. For those personnel returning to the ship, the senior troop representative should have a manifest ready to present to ship's 1 Alpha personnel upon debarking the craft. In those instances when a manifest is not available from returning landing force personnel, an accurate written muster will be taken by a designated troop representative at the marshalling area prior to dismissal. The muster report will be passed to Well Deck CCA in Well Deck Control. This manifest will be copied and sent to the Admin Officer with the original retained on file until the operation is over

(2) Debarking assault troops via landing craft from the ship, should be accomplished as follows:

(a) Ship will set condition 1 Alpha.

(b) Debark Control will call away assigned landing serials 15 minutes prior to the serial being required to proceed to their designated marshalling area. An example of the initial announcement from Debark Control is:

"SERIAL(S) 1001,1002,1003 AND 1004 LAY TO YOUR BERTHING AREAS AND PREPARE FOR SURFACE DEBARKATION"

This ensures that all personnel assigned to the serial(s) are ready to move with all their equipment to the marshalling area when called. Again, they will have approximately fifteen minutes to assemble their equipment and weapons and be ready to move when they will hear the next announcement from Debark Control which says:

"SERIALS 1001,1002,1003, AND 1004 LAY TO THE FORWARD PART OF THE HANGAR BAY FOR SURFACE DEBARKATION."

(c) Once in the designated marshalling area, combat cargo personnel will:

1 verify the troop/ passenger manifest.

2 conduct the required safety briefs and check for FOD.

3 maintain positive control of assault troops by landing serial.

4 maintain positive communications between the marshalling area, Debark Control, Well Deck Debark Control and the Upper Vehicle Hold (this may be done via a SABER or hand-held radio system).

(d) On order from the Well Deck CCA, via the 1 Alpha marshalling area supervisor, two troop guides per landing serial will lead the assault troops in a single file to the landing Craft. The 1 Alpha troop guide at the lead of the Landing Serial will be equipped with a man-on-the-move (MOM) or like radio system and is responsible for obtaining authorization from the Ramp Marshall prior to approaching the landing craft. The other troop guide will follow the last member of the landing serial and ensure there are no stragglers and that dropped equipment is picked up. Upon completion of embarking the landing serial, the lead troop guide will signal the Well Deck CCA that the serial has been loaded. Once the ramp is raised, the guides will depart the Well Deck Area.

(e) Debarkation information regarding number of troops embarked and landing serial number will be passed via the sound powered phones to Debark Control by the Well Deck CCA. The Well Deck CCA records all required information and provided a hard copy of the passenger/troop manifest as soon as possible by the troop guides.

e. Checklist.

(1) Planning and Preparations

(a) Complete all status boards with information required.

(b) Review ships 1 Alpha bill and ensure all personnel are trained as required.

(c) Review requirements for ships platoon personnel and ensure that no further training requirements exist.

(d) Review 1 Alpha station manning requirements.

(e) Ensure all life preservers are checked for serviceability.

(f) Conduct a communication test of all installed and portable communications equipment.

(g) Identify and source additional communications equipment which may be required.

(h) Checks routes to the Well Deck and ensure they are clear.

(i) Have all 1 Alpha personnel under your direction muster in advance to ensure they are properly equipped and prepared to execute their duties.

(2) Conduct briefs and issue any written instructions that may be required.

(3) The following must be used and properly maintained during each embark/debark evolution.

(a) Embarkation/Debarkation records that must be retained for future use.

(b) Status boards.

(c) Serial Assignment Table.

(d) Employment Assault and Landing Tables.

(4) Ensure Troop guides and landing serials proceed in a safe and orderly manner.

(5) Safety

(a) Ensure prescribed procedures and precautions are followed.

(b) Ensure all embarking/debarking troops are checked for FOD hazards.

5. **Landing Craft Loading And Unloading**. Standardized procedures for ship's combat cargo personnel and 1 Alpha team members for loading and unloading landing craft cargo under real or simulated combat conditions are required to support safe operations. These standardized procedures will ensure continuity of effort, streamline the development of shipboard training packages, and facilitate landing force shipboard integration.

a. Special Considerations. Prior to the commencement of each evolution, the Combat Cargo Officer should ensure that each of the following considerations is addressed.

(1) Ensure a serviceability check of all communication circuits and equipment designated for use by the embarkation/debarkation control stations (EMCON permitting).

(2) Set up the embark/debark status boards in accordance with latest operational plans.

(3) Conduct a meeting with key Well Deck control and 1 Alpha team personnel to ensure everyone has a complete understanding of the cooperation required to execute the landing plan.

(4) Identify, prioritize, and pre-stage vehicles and cargo if staging areas are available.

(5) Check the serviceability and availability of all cargo/material handling equipment (CHE/MHE), ramps, elevators, etc., required to support onload/offload operations.

b. Planning and Preparations.

(1) Obtain and distribute landing craft employment assault and landing table, and serial assignment table; highlighting all cargo, equipment, and vehicles scheduled for movement by surface craft).

(2) Brief all cognizant personnel on cargo handling procedures and load plans.

(3) Ensure required equipment is readily available for cargo loading.

(4) Complete all preparations for Well Deck operations in accordance with the ship's instructions.

(5) Brief all cognizant personnel as to onload/offload plan and load schedule. It is always a good idea to include LCAC and LCU Craftmasters in these discussions so that anticipated craft load plans can be reviewed.

c. Safety.

(1) Ensure all standard Well Deck, and vehicle/cargo handling safety precautions and operating procedures are observed during each evolution.

(2) Ensure all Vehicle Deck 1 Alpha/Ship’s Platoon and Well Deck personnel exercise due caution when an LCAC has engaged main engines.

(3) Ensure all 1 Alpha/Ship’s Platoon personnel are proactive in identifying potential FOD hazards. The movement and pre-staging of cargo, vehicles, and equipment generates ample opportunity for such hazards to manifest themselves. Only vigilance can prevent a disaster.

d. Landing Craft Loading and Unloading Procedures.

(a) The Combat Cargo Officer and Ship’s First Lieutenant will determine the best Well Deck location for recovering, loading/unloading, and launching assigned landing craft assets. This determination is made after considering spot availability, onload/offload requirements, safety, craft refueling requirements, and potential impacts staging and other shipboard evolutions.

(b) Load and unload unitized/palletized cargo, equipment, and vehicles into and from assigned landing craft in accordance with briefed procedures.

(c) Conduct 1 Alpha and Well Deck operations in accordance with latest operational plans and appropriate Debark Control agencies.

(d) Record cargo carried by each landing craft by craft number, destination, time of arrival, and time of departure (to be accomplished by status board keepers in Debark Control and Well Deck Control.) This

same information must be passed by the Well Deck CCA to the Combat Cargo Officer in Debark Control to facilitate the proper command and control of shipboard 1 Alpha operations.

(e) For loading, the Well Deck CCA will ensure that the Craftmaster agrees that the weight and arrangement of each load is within the prescribed safety limits given craft configuration, sea states, distance to the beach, and ambient temperatures.

(f) For unloading, The Well Deck CCA will coordinate the safe and efficient flow of vehicles, cargo and personnel to the appropriate vehicle and cargo stowage locations and/or to the hanger deck.

(g) In those instances where hazardous materials or munitions products require movement to or from a landing craft, the Combat Cargo Officer will coordinate with the Weapons/Ordnance Officer and appropriate Department Heads to facilitate the proper handling, receipt, and storage of these items.

(h) All vehicles and CHE/MHE will be guided to and from landing craft through the use of Traffic Directors equipped with traffic wands and whistles. Once directed by Debark Control, via Well Deck Debark, to commence loading/offloading, the Ramp Marshall, Well Deck CCA, and designated safety observers will monitor all such movements to ensure they are conducted in an orderly and safe manner.

(i) Specific and detailed guidance relative to Well Deck operations and landing craft loading and unloading may be found in the Wet Well Manual and SEAOPS Manual for conventional and air cushioned landing craft respectively.

e. Checklist.

(1) Planning and preparation.

(a) Ensure advance preparations are complete.

(b) Ensure briefings for 1 Alpha personnel are complete.

(c) Ensure 1 Alpha is set properly and required personnel/equipment are on station.

(d) Ensure all unnecessary personnel are cleared from Vehicle Decks and Well Deck.

(e) Ensure 1 Alpha/Ship's Platoon personnel are properly dressed and equipped.

(f) Ensure arrangements have been made for loading/unloading cargo/vehicle and personnel according to assigned priorities.

(g) Ensure all 1 Alpha/Ship's Platoon personnel are familiar with their duties.

(h) Ensure all obstructions are removed from cargo/vehicle/personnel routes to and from the Vehicle Deck and Well Deck.

(i) Ensure all loads are properly spotted on the Vehicle Decks.

(j) Ensure facilities are available for emergency repair to wheeled vehicles and MHE/CHE.

(2) Execution.

(a) Ensure operations are conducted in accordance with current regulations.

(b) Ensure effective communications is maintained with all stations.

(c) Debark Control coordinates all serial movements.

(d) Ensure Well Deck CCA is aware of all cargo/vehicle/personnel movement operations.

(e) Ensure all serials are handled smartly and expeditiously.

(f) Ensure all vehicles are handled properly and safely.

(g) Ensure all internal loads are handled properly and safely.

(h) Ensure proper cargo records and status boards are maintained.

(i) Ensure the Personnel, Cargo, Vehicle and Estimated Time of Completion (PCVT) report is accurate and submitted in accordance with the PCS Intentions message.

6. **Receiving and Handling Casualties**. The Combat Cargo Officer is not specifically responsible for the shipboard planning and execution when receiving and processing casualties. This duty is normally assigned to the ship's Medical Officer. However, the Combat Cargo Officer does play a major role given the overall responsibility to the Commanding Officer for loading and offloading all personnel, supplies, and equipment. The purpose of this section is to highlight some of the considerations, planning, and preparations that must be addressed relative to receiving casualties via the Well Deck. Each Combat Cargo Officer must familiarize themselves with the ship's Mass Casualty Bill for a definitive list of assigned tasks, duties, and responsibilities.

a. Special Considerations.

(1) Prior to commencement of evolution, check the serviceability of all communication circuits and equipment designated for use by Embark/Debark Control stations (EMCOM permitting).

(2) Set up embark status board in accordance with latest operational plans prior to commencement of evolution.

(3) Brief key Well Deck Control personnel and 1 Alpha/Ship's Platoon personnel, medical personnel, stretcher-bearers, and Master-at-Arms or troop guards.

(4) If the ship has installed morgue freezers, ensure they are on and operational (Coordination with the ship's Medical Department is required).

b. Planning and Preparation.

(1) Instruct all stretcher-bearers on correct method of transporting casualties to medical triage/battle dressing stations.

(2) Ensure routes from medical triage area/battle dressing station to sick bay are cleared of all obstacles.

(3) Verify the location of the Master-at-Arms/troop guard station and the medical triage/battle dressing station area. Personnel manning this station will receive, label, search, and secure ammunition and weapons from the casualties.

(4) Ensure medical has been provided a list of names, by blood type, for all embarked landing force and Naval Support Element (NSE) personnel.

(5) Provide instructions for Debark Control, Well Deck Debark, Well Deck Control, and Well Deck personnel (including the Ramp Marshal, station phone talker, 1 Alpha/Ship's Platoon personnel, stretcher-bearers, medical corpsmen, and Master-at-Arms/troop guards), emphasizing:

(a) Ships organization for embarking/receiving casualties and individual duties for key personnel.

(b) Safety procedures and special hand signals for requesting stretcher-bearers to the landing craft.

(c) Embark/debark communications via 3MC/5MC/10MC/1VN and sound power phones procedures in the event of communication casualty.

c. Safety.

(1) Ensure all standard safety precautions are followed.

(2) Ensure 1 Alpha/Ship's Platoon personnel, medical corpsmen, and stretcher-bearers obtain authorization from the Ramp Marshal before moving into the Vehicle Deck when an LCAC has main engines engaged.

(3) Ensure FOD hazards are removed from the casualties prior to their movement.

d. Procedures.

(1) Conduct well operations in accordance with applicable regulations.

(2) When ship receives information on an inbound MEDEVAC the medical/stretcher bearer teams should be called away via the ship's general announcing system and readied.

(3) Well Deck Control should direct the landing craft to the forward most landing craft spot.

(4) Once the ship receives the landing craft, it should process and handle casualties, as follows:

(a) Once the MEDEVAC landing craft is on spot, 1 Alpha personnel/Ship's Platoon stretcher-bearers and corpsmen, with authorization from the Ramp Marshal, will proceed to the landing craft. The corpsman will conduct triage on the landing craft if required. All wounded troops capable of walking and who require escort service will be escorted to a designated location as quickly as possible. At this point all remaining passengers will be considered stretcher cases and stretcher bearer teams will move them on command from the corpsman to the designated triage area and/or medical spaces.

(b) At the medical triage area, medical personnel will provide further medical triage/assistance to the casualties.

(c) The ship's Master-at-Arms/troop guards will check for ammunition and remove and secure weapons from the casualties. Ensure that a tag or label is affixed to the stock of the weapons taken into custody, with the following information, (i.e., available from the wounded troop's medical tag):

1 Rank.

2 Initials and last name.

3 Branch of service.

4 Last 4 digits of SSN.

5 Unit.

(5) Collected ammunition will be inventoried, boxed, unitized or palletized and sealed. Markings or placard with the essential information of DODIC/NALC and quantities and owning unit will be affixed to the exterior of each box. Ammunition will be secured in either magazines or jettisonable lockers.

(6) Collected weapons will be secured in an armory.

(7) Casualties will be transferred to sickbay or other locations as directed by medical personnel.

e. Checklist.

(1) Planning and preparation

(a) Medical supplies and personnel are on-station and prepared to receive casulaties.

(b) Communication circuits have been tested and are functioning.

(c) Stretcher-bearers have mustered on station in proper gear and are familiar with their routes.

(d) The Well Deck and routes to medical triage/sickbay have been cleared of all obstacles.

(2) Execution

(a) Ensure prescribed procedures are followed.

(b) Ensure casualties are handled expeditiously and efficiently.

(c) Ensure casualties are properly secured and protected from elements while being transported.

7. **Loading/Unloading Passengers, Mail and Cargo (PMC)**. The intent of this section is to establish standardized procedures for the ship's 1 Alpha/Ship's Platoon organization when conducting PMC operations via landing craft. PMC is an administrative evolution. As such, the Combat Cargo Officer is required to manage surface PMC requirements since it involves the movement of cargo, vehicles, or personnel via the Well Deck.

a. Special Considerations.

(1) 24 hours in advance, coordinate with ship's Executive Officer, Supply Officer (Material Control Officer), Chief Engineer, Admin Officer, Postal Officer and embarked organizations, (i.e., troop/landing force operations center, staff, etc.) for outgoing PMC information and materials.

(2) If necessary, arrange for shipboard working party to consolidate and pre-stage mail and cargo.

(3) If deployed, be prepared to handle PMC between ships in company.

b. Planning and Preparation.

(1) Establish liaison with ship's department heads and embarked organizations for PMC evolution at least 24 hours in advance.

(2) Obtain authorized outbound passenger list from ship's Executive Officer.

(a) When conducting PMC operations via surface craft, the ship's Executive Officer is the approval authority given his additional duty as the ship's Debark Control Officer. He/she in effect performs the same mission as the TACRON and the Air Planning Board when they develop the Air Tasking Order (ATO) for PMC requiring movement via rotary wing aircraft.

(3) Monitor daily plan and make liaison with the ship's First Lieutenant for update on all Well Deck operations; particularly inbound and outbound schedules.

(4) Conduct briefings with all personnel to be involved in the evolution; especially 1 Alpha team/Ship's Platoon personnel.

(5) Arrange and designate an administrative muster area for passengers, (i.e., hangar, triage area, mess deck, etc.).

(6) Disseminate required muster time to outbound passengers.

(7) Arrange for a staging area and working party to pre-stage mail and cargo, if necessary.

(8) Establish inbound passenger control station for shipboard security check for personnel verification, muster and reporting purposes.

c. Safety.

(1) Ensure all standard safety precautions are met.

(2) Ensure all 1 Alpha personnel obtain authorization from the Ramp Marshal before proceeding to and from any landing craft.

(3) Ensure all FOD hazards are removed from cargo and personnel prior to their loading/unloading from any landing craft.

d. Procedures.

(1) Loading PMC onto a landing craft:

(a) Conduct safety brief for all outbound passengers.

(b) Ensure the 1 Alpha/Ship's Platoon personnel check passengers/cargo for FOD.

(c) Distribute passenger manifest in accordance with shipboard instructions and existing standard operating procedures (SOPs).

(d) Prioritize all outbound surface PMC requirements in accordance with the ship's Executive Officers instructions.

(e) Ensure all outgoing mail and cargo is properly bagged, boxed, unitized or palletized. Proper address, labels, markings, or placards should be firmly affixed to mail and cargo.

(f) Ensure load will be within load limits of landing craft.

(g) Direct 1 Alpha/Ship's Platoon MHE operators to load unitized and palletized cargo.

(2) Unloading PMC from a landing craft:

(a) For maximum safety, 1 Alpha/Ship's Platoon personnel will be assigned to lead troops/passengers to the designated inbound passenger control station and conduct the necessary security checks and any required administrative processing. Normally, the ship's Master-at-Arms force will conduct the security checks.

(b) Direct 1 Alpha/Ship's Platoon personnel to off-load any loose, bulk cargo items that may be hand-carried.

(c) Direct 1 Alpha/Ship's Platoon MHE operators to off-load unitized/palletized cargo.

(d) Coordinate with appropriate shipboard organizations to pick up incoming mail and cargo from its designated staging area. 1 Alpha/Ship's Platoon personnel do not deliver mail and cargo.

e. Checklist.

(1) Planning and Preparation.

(a) Ensure advance preparation is complete.

(b) Ensure all stations are promptly and adequately manned.

(c) Ensure all personnel have the proper safety gear.

(d) Ensure communications are adequate and tested prior to evolution (EMCON permitting).

(e) Ensure routes to the Well Deck are clearly understood by all.

(f) Ensure 1 Alpha/Ship's Platoon personnel are equipped with properly colored safety gear.

(g) Ensure all briefings are conducted.

(2) Execution.

(a) Ensure prescribed procedures are followed.

(b) Ensure Communications are satisfactorily tested (EMCON permitting).

(c) Ensure the following are used and properly maintained:

1 Passenger manifest/muster record.

2 Status Boards.

(d) Ensure Troops/passengers proceeded in a safe and orderly manner.

8. **Non-Combatant Evacuation Operations (NEO).** Operationally engaged maritime forces have routinely conducted NEO's. The special and unique nature of this type of operation cannot be overemphasized nor can its potential impact on Well Deck operations. Although this chapter does not specifically address the NEO, it is imperative that each Combat Cargo Officer reviews the ship's NEO Bill. Fleet Regulations require each amphibious ship to develop a NEO Bill and to exercise it as a matter of routine. Given the wide variance in shipboard NEO procedures, each ship's instruction differs greatly when it comes to the tasks, duties, and responsibilities of assigned personnel.

APPENDIX J

FLIGHT DECK COMBAT CARGO OPERATIONS

1. **General**. This chapter outlines cargo handling procedures and the cargo handling personnel qualifications for Flight Deck operations on amphibious ships. All Flight Deck operations and training shall be conducted in accordance with the appropriate NATOPS Manual and the ship specific Air Department Standard Operating Procedures. This chapter provides a generic overview of combat cargo operations and the conduct/requirements for personnel assigned to "Condition 1A" on the Flight Deck. The procedures also apply to personnel who augment or support Flight Deck cargo handling operations.

2. Combat Cargo Responsibilities and Duties. The ship's combat cargo personnel are responsible for the safe and orderly flow of troops, supplies and equipment, to include passengers, mail, cargo (PMC) to and from aircraft. This includes both operational and administrative phases of shipboard flight deck operations. Specific duties include, but are not limited to, the following:

a. Manifesting for all personnel arriving or departing in an administrative or tactical status. The Combat Cargo Officer is responsible for generating the manifest for all administrative movements to include passenger, mail, and Cargo (PMC) flights. The landing force is responsible for preparing manifests for all tactical movements and delivering them to the Combat Cargo Officer at least 12 hours prior to the scheduled aircraft launch time. Each manifest should include the following minimum information.

(1) Last Name and Initials.

(2) Rank/Rate.

(3) Social Security Number.

(4) Organization.

(5) Destination.

(6) Blood Type.

b. Troop/passenger pre-flight briefings:

(1) Flight Deck precautions.

(2) Primary and alternate routes to helicopters.

(3) Personal survival equipment and its use.

(4) Helicopter ditching and emergency egress stations.

c. Conduct a foreign object damage (FOD) check to ensure that all personnel, supplies, equipment and PMC being moved on the flight deck does not endanger shipboard flight deck operations by creating a FOD hazard. Additionally, combat cargo personnel are responsible for ensuring only trained guides are used during the execution of such movements.

d. For administrative movements, passengers should be provided with approved head/hearing protection and floatation devices from the aircraft they are to board. Eye protection should be provided, if available. All personal protective gear shall be properly donned by passengers prior to proceeding onto the Flight Deck.

e. Be familiar with load capacities/restrictions, aircraft survival equipment, and emergency escape procedures for each aircraft model expected on board for logistics purposes.

f. Inspect cargo and vehicles prior to loading to ensure they are prepared for air movement in accordance with existing instructions.

3. **Performance Qualification Standards Requirements.** All personnel assigned to the Flight Deck Cargo/Troop/Vehicle section of the ship's Condition 1 ALPHA Bill should be trained in accordance with the Flight Deck familiarization PQS and the appropriate aviation references. The prerequisite to all other 1 Alpha/Ship's Platoon training should be the Flight Deck Familiarization PQS; NAVEDTRA 43426-B. Upon completion of the PQS, all 1 Alpha/Ship's Platoon/Ship's Platoon personnel must receive further instruction from the CCO specific to cargo handling. All training should be recorded and maintained by the individual's Department and the CCO. Additionally, combat cargo must be aware of individual qualifications for personnel assigned to the Flight Deck 1 Alpha/Ship's Platoon team. These qualifications include:

a. Aircraft Fire Fighting.

b. Basic Damage Control.

c. Ordnance Handling Certifications.

d. Pallet Conveyor/Elevator Operator licensing (to include requirements for handling munitions products).

e. Forklift Operator licensing (to include requirements for handling munitions products).

4. **Embarking/Debarking Troops Via Helicopter**. The use of standardized procedures by the ship's Flight Deck organization is considered a safety imperative given the risks associated with shipboard Flight Deck operations. The following procedures are provided as a baseline for conducting combat cargo operations on the Flight Deck. It is important to note that all Flight Deck tactical embark/debark evolutions are conducted in accordance with the Helicopter Employment and Assault Landing Table (HEALT), Heliteam Wave and Serial Assignment Table (HWSAT) and the Serial Assignment Table; landing force documents sourced from the Landing Plan.

a. Special Considerations. Prior to the commencement of each evolution:

(1) Conduct a serviceability/operational check of all communications circuits and equipment designated for use by the embark/debark control stations (EMCON permitting).

(2) Set up embark/debark status boards in accordance with the latest operational plans.

(3) Brief with the key Flight Deck Control personnel and 1 Alpha/Ship's Platoon troop guides.

(4) Conduct required serviceability/operational checks of personal floatation devices in accordance with appropriate maintenance repair card (MRC).

b. Advanced Planning and Preparation.

(1) Liaison with troop representatives to coordinate onload/offload and advance/rear party requirements.

(2) Obtain and distribute the HEALT, HWSAT, and Serial Assignment Table

(3) Brief the ships 1 Alpha Bill and landing force augments from the Ship's Platoon.

(4) Provide an embark/debark plan to all of the ship's Departments and key embarked organizations that emphasizes:

(a) Organization of the ship for embark/debark and a brief, yet concise list of individual duties of the key personnel involved.

(b) Chain of command and relations between embark/debark control stations and the assembly areas.

(c) Embark/debark communications to be used and the plan for communicating in the event of an equipment casualty.

(5) Conduct a brief for concerned personnel that outlines, at a minimum, the following topics.

(a) General organization/composition of helicopter serials and the use of the troop/passenger manifest.

(b) Duties of the helicopter team leader for each embarking/debarking heli-team.

(c) Adjustment of equipment (782 gear/individual or crew served weapons and backpack field radios).

(d) Equipment stowage plan for hand/carry-on cargo, organic to the unit, that is essential to the mission.

(6) Fill-in all required information on the appropriate status boards in embark/debark control stations (e.g., Debark Control, Flight Deck Debark). These status boards should contain the following basic information.

(a) Troop Serials.

(b) Helicopter Waves.

(c) Actual side number of helicopter and the corresponding serial embarked. (This is left blank until the aircraft is actually loaded.)

(d) Load information (e.g., number of troops, weight, type of portable equipment, etc.).

(e) Load time of serial.

(f) Destination (name of LZ, airfield, ship, etc.).

c. Safety.

(1) Observe standard flight deck safety precautions as required by NATOPS and ship's regulations.

(2) Ensure that 1 Alpha/Ship's Platoon troop guides obtain authorization from the Landing Signalman Enlisted (LSE) before moving to or away from helicopters with engaged rotors.

(3) Ensure all embarking/debarking personnel, supplies, and equipment is checked for FOD hazards prior to their movement onto the Flight Deck.

d. Procedures.

(1) Embarking troops on helicopters should be accomplished in the following manner.

(a) Two 1 Alpha/Ship's Platoon troop guides will escort one helicopter team of assault troops at all times in order to maximize safety. The 1 Alpha/Ship's Platoon lead troop guide should have radio

communications with flight deck debark (on larger amphibious ships) or with Primary Flight (PriFly) Control (on smaller amphibious ships). The second 1 Alpha/Ship's Platoon troop guide will perform duties as the trail man for each load helicopter team. The helicopter team must always proceed in single file whether embarking or debarking an aircraft. It is the responsibility of the 1 Alpha/Ship's Platoon troop guides to ensure that this occurs.

(b) On orders from the CCO/CCA and with authorization from the LSE, the lead and trail 1 Alpha/Ship's Platoon troop guides approach an aircraft that requires unloading. The lead guide will signal the LSE to have the pilot lower the aircraft ramp. Once the ramp is down, the lead guide then signals the troops/passengers inside the aircraft to follow him in a single file to the rear of the aircraft. Once the passengers begin to deplane, the lead troop guide signals the LSE and requests permission to depart the spot. Once permission has been received, the lead guide signals the troops to follow him off the spot. The trail guide remains until the last passenger has deplaned and falls in behind the last person. The trail guide signals the LSE that unloading is complete. Upon clearing the aircraft of all guides and passengers, the LSE then signals the pilot to raise the aircraft ramp.

(c) In the assembly area, the senior troop representative will have any unexpended munitions products turned in and ensure all weapons are cleared, inspected, and locked in a safe manner.

(d) Collected munitions products will be boxed, unitized or palletized and sealed. Markings or placards with the essential information of DODIC/NALC, quantities and owning unit will be affixed. Ship's personnel (Aviation Ordnancemen or Gunner's Mates) and landing force ammunition technicians should be present during this collection, packaging, and marking process.

(e) All collected munitions will be stored in appropriate magazines in accordance with applicable directives/instructions.

(f) A muster will be taken by the senior troop representative at the assembly area prior to dismissing personnel. The muster report should be passed to the Flight Deck combat cargo personnel where it will be retained on file.

(2) The debarkation of troops via aircraft should be accomplished as follows:

(a) The ship should set Condition 1 Alpha for Flight Deck operations if all 1 Alpha/Ship's Platoon team personnel (forklift/elevator operators, etc.) are required to effect the timely and safe offload of landing force personnel. At a minimum, the ship will set Flight Quarters and man all Flight Quarters stations. Normally the setting of Flight Quarters alone only provides Air Department manning.

(b) Debark Control will call away assigned landing serials to report to their designated assembly area. An example of the initial announcement from Debark Control is:

"SERIAL(S) 1001,1002,1003 AND 1004 LAY TO YOUR BERTHING AREAS AND PREPARE FOR AIR DEBARKATION"

This ensures that all personnel assigned to the serial(s) are ready to move with all their equipment to the assembly area when called.

"SERIALS 1001,1002,1003, AND 1004 LAY TO THE FORWARD PART OF THE HANGAR BAY FOR AIR DEBARKATION."

(c) Once in the designated assembly area, combat cargo personnel will:

1 verify the troop/passenger manifest. (3 copies)

2 conduct the required aircraft and Flight Deck safety briefs

3 conduct a FOD inspection.

4 maintain positive control of assault troops by landing serial.

5 maintain positive communications between the marshalling area, Debark Control, and Flight Deck Debark Control

(d) Once theses steps are complete, combat cargo personnel should ensure that personnel assigned to the serials remain in the assembly area grouped by landing serial and in a single file ready for debarkation.

(e) Positive communications between the assembly area, Debarkation Control, Flight Deck Debark and Primary Flight Control be maintained at all times. The timely reporting of landing serial readiness is of critical importance during debarkation. The recommended reporting structure, as reflected in Table J-1, has the assembly area reporting to Debarkation Control via Flight Deck Debark when serials are assembled and ready to debark the ship. Debark Control informs Primary Flight Control on the status of landing serials. When Primary Flight Control is ready for the troops/passengers to embark awaiting aircraft, they inform Debarkation Control who directs Flight Deck Debark and the assembly area to execute the movement.

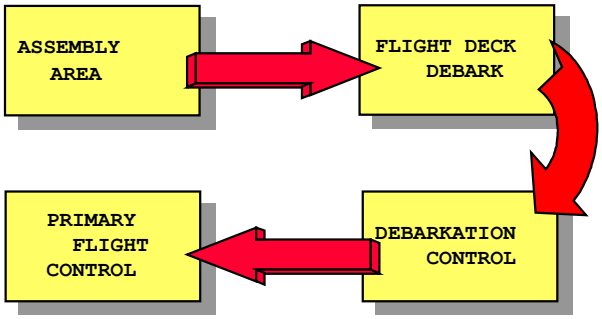

Table J-1

(f) On order from Flight Deck Debark, two troop guides lead each of the landing serials via predetermined routes from the marshaling area to the flight deck. Once the lead troop guide arrives on the flight deck, he is responsible for obtaining permission to approach the aircraft from the LSE. This permission must be obtained prior to the troop guide crossing the foul line. The trail troop guide follows the last member of the serial and ensures that the troops/passengers do not drop equipment on the flight deck. Additionally, he assists stragglers as may be required. After loading a serial on an aircraft, the lead troop guide will signal the LSE that loading is complete and that the ramp is cleared and ready to be raised. Once all personnel and their cargo/equipment are loaded on the aircraft, both troop guides obtain authorization from the LSE to depart the aircraft spot.

(g) Debarkation information regarding the number of troops debarked and their associated landing serial number will be passed to Debarkation Control via Flight Deck Debark. Both Debark Control and Flight Deck Debark will record this information on the appropriate status boards as required. Flight Deck Debark will receive and retain copies of all manifests.

e. Checklist.

(1) Advance Preparations.

(a) Fill-in status boards with required information, as required.

(b) Review ship's 1 Alpha Bill and ensure all personnel are trained as required.

(c) Review requirements for ship's platoon personnel and ensure that training is complete.

(d) Review and identify those debarkation stations that must be manned to support embark/debark requirements.

(e) Ensure all life preservers are checked for serviceability.

(f) Conduct a test of communications equipment required to support the evolution.

(g) Identify and source additional communications equipment that may be required.

(h) Check passenger movement routes to the Flight Deck and ensure they are clear.

(i) Have all 1 Alpha/Ship's Platoon personnel assemble and conduct an inspection of their Flight Deck and personal safety equipment.

(j) Conduct detailed onload/offload briefs and review/issue instructions as may be required.

(k) Conduct a Flight Deck safety brief for all 1 Alpha/Ship's Platoon personnel.

(l) Validate/verify the aircraft spotting plan with Flight Deck Control and ensure any changes are annotated on the HWSAT, appropriate status boards. Flight Deck combat cargo personnel should also notify Debark Control of any changes to the aircraft spotting plan.

(2) Execution.

(a) Ensure operations are conducted in accordance with current regulations.

(b) Ensure effective communications are maintained with all stations.

(c) Ensure Flight Deck CCA is aware of all cargo/vehicle/personnel movement operations.

(d) Ensure pertinent PCVT data is forwarded to Debark Control when requested.

(e) Ensure all records and status boards are accurately maintained. The following embark/debark records must be maintained during each and every evolution. It is recommended that combat cargo personnel develop some electronic means of documenting this information for analysis and historical reference after the evolutions are completed.

1 Flight Deck status boards and logbooks.

2 Serial Assignment Table (to include annotations relative to changes, additions, or deletions.)

3 HEALT and HWSAT (to include annotations relative to changes, additions, or deletions.

(f) Ensure troop guides and landing serials proceed in a safe and orderly manner.

5. **Helicopter/Aircraft Cargo Loading and Unloading**. The purpose of this section is to provide an overview of standardized procedures when loading and unloading cargo from helicopters/aircraft under real or simulated combat conditions.

a. Special Considerations. Prior to the commencement of any evolution, ensure that the following actions are complete.

(1) Check the serviceability of all communications circuits and equipment designated for use at debarkation control stations (EMCON permitting).

(2) Set up embark/debark status boards in accordance with the latest operational plans.

(3) Conduct briefings for key flight deck control personnel and 1 Alpha/Ship's Platoon troop guides and cargo handlers. This includes ship's personnel as well as any landing force augments (Ship's Platoon).

(4) Identify, prioritize, pre-net, pre-sling, and pre-stage cargo for internal/external lift in designated staging areas (space permitting).

(5) Coordinate with the appropriate ship's Department Heads for serviceability and functional checks of all shipboard material handling equipment, ramps, elevators, pallet conveyors, transfer tables, etc. which will be used to support/execute cargo offload and onload operations.

(6) Ensure adequate quantities and types of MHE/CHE are positioned in shipboard locations so as to fully support the expeditious loading/unloading and safe handling of all cargo items.

b. Planning and Preparations.

(1) Obtain and distribute the Helicopter Employment Assault and Landing Table (HEALT), Heliteam Wave and Serial Assignment Table (HWSAT) and Serial Assignment Table highlighting all cargo, equipment, and vehicles designated for offload/onload via helicopter lift.

(2) Brief cognizant personnel on cargo handling procedures and load plans.

(3) Ensure required equipment, slings, and nets are readily available to support both internal and external cargo loading/offloading.

(4) Complete all preparations for flight operations in accordance with ship's instructions.

(5) Brief personnel on the contents of the flight plan, HWSAT/HEALT, and loading schedules and ensure that proper coordination occurs between the various landing force elements and the ship's Air Department.

c. Safety.

(1) Ensure all standard Flight Deck and cargo handling safety precautions and operating procedures are observed during each evolution.

(2) Ensure cargo handling personnel exercise caution when moving in/around helicopters/aircraft with engaged rotors.

(3) Ensure cargo handling personnel are proactive in their efforts to prevent FOD hazards on the Flight Deck.

d. Procedures.

(1) Internal Cargo Loading and Unloading:

(a) Coordinate with the Flight Deck Officer and Aircraft Handling Officer to determine the best spot for loading/unloading and launching helicopters/aircraft on the flight deck.

(b) Load/unload unitized or palletized cargo, equipment, and vehicles into and from assigned helicopters in accordance with briefed procedures contained in NWP 42 and the appropriate NATOPS manual.

(c) Conduct flight operations in accordance with the latest operational plans and appropriate air operations control agencies. Issues or questions that will arise should be channeled to Debark Control for resolution since they are constant communication with TACLOG, Flag Plot, the Landing Force Operations Center (LFOC), and Primary Flight Control.

(d) Status Board keepers in Debark Control and Flight Deck Debark should record the cargo, supplies, and equipment loaded and unloaded from each helicopter/aircraft on their respective status boards. This information should include the aircraft "side" number, destination, time of departure, and a list of the cargo supplies, and equipment loaded/unloaded.

(e) Ensure that the weight of each load is within safe limits and does not exceed the capabilities of the helicopters/aircraft employed for an operation. Through advance coordination with the aircraft squadron, the CCO will be able to determine weight limitations for each type/model/series of aircraft since ambient temperature, altitude, distance, and other factors affect this weight.

(f) When offloading cargo, supplies, and equipment, Flight Deck combat cargo personnel are responsible for coordinating the safe, efficient, and orderly movement of offloaded items from the helicopter to their ultimate stowage locations. This requires the CCO/CCA to orchestrate the movement of 1 Alpha/Ship's Platoon troop guides, cargo handlers, cargo handling equipment, and other Flight Deck personnel as they receive and process offloaded cargo items. Again, it is imperative that detailed and accurate data is captured on all cargo, supplies, and equipment once it is offloaded.

(2) External Loading and Unloading:

(a) When preparing external loads, ensure a well indoctrinated external loading/unloading team, under the supervision of the CCO/CCA, is available on the Flight Deck. If embarked, a Marine Helicopter Support Team (HST) should be used. The landing force should provide HST support whenever possible.

(b) Flight Deck combat cargo is responsible for ensuring that external loads are properly rigged. A total of three personnel are required on the helicopter/aircraft spot to make the hook-up; the hook-up man with a set of electricians rubber gloves, a probe man wearing leather gloves over rubber gloves and equipped with a static discharge probe, and a qualified LSE. Once the load is lifted, combat cargo personnel must ensure that the static discharge probe is removed from the deck and that the personnel assist each other in clearing the spot while moving to the designated safety area. Only after the probe and hook-up men are clear of the spot will the LSE signal the helicopter to depart the deck.

1 Connecting the probe to the deck is accomplished using the clip connected to the grounding wire of the probe. It must be securely fastened to the deck to obtain a proper ground. This is normally accomplished by attaching the clip to one of the cloverleaf tiedown points in close proximity to the load being lifted.

2 Once the LSE brings the helicopter into a hover over the load, the probe man grounds the aircraft hook by catching it with the probe and maintaining positive contact until the hook-up man places the cargo pendant or net over the hook. The potential for serious or grave injuries exist if the probe man loses contact with the hook. This is due to the helicopters ability to generate significant static electricity.

3 Equally important is the need to expeditiously remove the probe clip from the cloverleaf securing point. In some instances the probe man may experience difficulty in removing the clip. In these instances the LSE must ensure that the helicopter remains in a stable hover until all personnel are clear.

(c) Each member of the Flight Deck combat cargo team must wear approved flight deck safety equipment. Flight Deck safety equipment includes steel-toed boots, cranial, goggles, jersey, and life vest. The appropriate color for the flight deck jersey, cranial, and life vest is white for combat cargo personnel.

(d) Cargo that is being prepared for external lift must be free of FOD and netted in a cargo net capable of supporting the weight of the cargo to be moved. The netting and preparation of the cargo may occur on the helicopter spot from which it will ultimately be lifted or prepared in advance, staged, and then moved via forklift to the designated aircraft spot. The operational tempo and landing force requirements will determine which method is used.

(e) When preparing to execute the external lift of vehicles, howitzers and equipment, they may be rigged with HST slings either on the spot from which they will be lifted or rigged in the staging area. Once moved to the Flight Deck spot for actual lift, a recommended maximum of five personnel should be used to execute the lift. These five personnel consist of the hook-up man with a set of electricians rubber gloves, a probe man wearing leather gloves over rubber gloves and equipped with a static discharge probe, a qualified LSE, and two crewmen to handle the legs of the HST slings. It is important that the HST sling remains straight and is prevented from wrapping around or getting caught on anything that might prohibit the safe lifting of the load. Once the load is lifted to the point where the HST slings are taut, ensure the static discharge probe is removed from the deck and that the combat cargo personnel egress the area, in teams, to a designated safe area. After all team members have safely cleared the area, the LSE may launch the helicopter. Under no circumstances should the LSE direct the helicopter to lift the load while the load team is still under or near the load.

(f) During Vertical Replenishment (VERTREP) operations, combat cargo is responsible for ensuring that the ship's 1 Alpha/Ship's Platoon guides and cargo handlers are readily available on the flight deck. These personnel will be required to rig external VERTREP loads and to execute the actual hook-up of the load using MK-105 pendants and cargo nets. VERTREP operations are very similar in nature to the external loading of landing force supplies. The only difference is the operational pace on the Flight Deck. You will find that things happen much quicker during a VERTREP because of the need to rapidly execute the resupply operation so that ships may return to normal schedule. The same procedures previously outlined for rigging and lifting external cargo loads also applies to VERTREP cargo.

(g) During external load recovery, Flight Deck combat cargo personnel are responsible for the load once it touches down on the Flight Deck. The CCO/CCA orchestrates the safe and orderly movement of the cargo/vehicles/equipment using vehicle operators, MHE, 1 Alpha/Ship's Platoon or troop guides, and cargo handlers. There are two key points to remember when recovering cargo/vehicles/equipment on the Flight Deck. The first is that all movements must be closely coordinated with Flight Deck Control and Primary Flight Control (PRIFLY). The second key point is to never move a vehicle or piece of unit equipment without the unit being present and a licensed operator actually driving the vehicle. Additionally, combat cargo personnel are responsible for recovering all lifting slings, nets, and pendants from cargo, vehicles, or equipment once the item is delivered to the ship via external lift.

e. Checklist.

(1) Advance Planning and Preparations. Ensure that the following actions are complete.

(a) Flight Deck safety and offload/onload briefings for 1 Alpha/Ship's Platoon cargo handlers.

(b) 1 Alpha is set properly and that all required personnel and equipment are on station.

(c) All unnecessary personnel are cleared from the Flight Deck.

(d) 1 Alpha/Ship's Platoon troop guides and cargo handling personnel are properly dressed and equipped and are familiar with their duties.

(e) Effective arrangements have been made for loading/unloading cargo according to assigned priorities.

(f) All obstructions are removed from cargo/vehicle/personnel routes to and from the flight deck.

(g) Loads are prepared and properly spotted on the Flight Deck.

(h) External lift cargo is properly rigged to include the nets, slings and pendants.

(i) Facilities are available for effecting emergency repair of wheeled vehicles and all ship's organic MHE/CHE.

(2) Execution. Ensure that each of the following actions are completed.

(a) Flight Operations are conducted in accordance with NWP 42, NATOPS, and ship's SOP.

(b) Effective communications are maintained with all stations.

(c) Debark Control coordinates all serial movements.

(d) The CCO/CCA supervises all cargo handling operations.

(e) Loads are handled smartly, safely, and expeditiously and that they are inspected for potential FOD hazards prior to movement to, or on the Flight Deck.

(f) Vehicles and MHE/CHE are operated in a safe manner by licensed operators.

(g) Required cargo records and status boards are maintained.

6. **Receiving and Handling Casualties from Helicopters/Aircraft**. Combat Cargo personnel are not specifically responsible for the shipboard planning and execution when receiving and processing casualties. This duty is normally assigned to the ship's Medical Officer. However, Combat Cargo does play a major role given the overall responsibility to the Commanding Officer for loading and offloading all personnel, supplies, and equipment. The purpose of this section is to highlight some of the considerations, planning, and preparations that must be addressed relative to receiving casualties via the Flight Deck. A definitive list of assigned tasks, duties, and responsibilities can be found in the ship's Mass Casualty Bill.

b. Special Considerations. Prior to the commencement of the evolution the combat cargo should

(1) Check the serviceability of all communications circuits and equipment designated for use by all embark/debark control stations (EMCON permitting).

(2) Set up embark status boards in accordance with the latest operational plans.

(3) Brief key Flight Deck Control personnel and 1 Alpha/Ship's Platoon troop guides, medical personnel, stretcher-bearers, and Master-at-Arms or troop guards.

(4) If the ship has installed morgue freezers, ensure they are on and operational (Coordination with the ship's Medical Department is required).

c. Planning and Preparation.

(1) Instruct all stretcher-bearers on the correct method for transporting casualties to medical triage/battle dressing stations and the appropriate routes to be used.

(2) Ensure that the designated routes from medical triage/battle dressing stations are clear of obstacles that might impede the movement of casualties.

(3) Verify the location of the Master-at-Arms/troop guard station and the medical triage/battle dressing station area. Master-at-Arms personnel manning this station will secure and account for ammunition and weapons from casualties.

(4) Ensure medical has been provided a list of names, by blood type, for all embarked landing force and Naval Support Element (NSE) personnel.

(5) Debark Control should provide instructions for Flight Deck Debark, Flight Deck Control, and Primary Flight Control which emphasizes:

(a) Organization of the ship for embarking/receiving casualties.

(b) Safety procedures and special hand signals for stretcher-bearers as well as 1 Alpha/Ship's Platoon troop guides on the flight deck.

(c) Embark/debark communications via the 1MC/3MC/5MC and sound powered phone circuits while also ensuring communications casualty procedures are addressed.

d. Safety.

(1) Ensure all standard safety precautions are addressed during briefings and adhered to during the conduct of the evolution.

(2) Ensure 1 Alpha/Ship's Platoon troop guides, medical personnel, and stretcher bearers obtain authorization from the LSE prior to moving to or away from aircraft with engaged rotors.

(3) Ensure that each casualty is inspected for FOD hazards prior to movement.

e. Procedures

(1) Conduct flight operations in accordance with NWP 42 and the ship's appropriate NATOPS manual.

(2) When the ship receives information relative to an inbound MEDEVAC, it should automatically set Flight Quarters and institute the procedures for handling casualties outlined in the ship's Mass Casualty Bill. All 1 Alpha/Ship's Platoon and landing force designated personnel should immediately report to their stations and don their flight deck safety equipment and await instructions from the CCO/CCA.

(3) Primary Flight Control (PRIFLY) will determine the quantity and nature of the casualties from the inbound aircraft via radio communications and pass the information to Debark Control, Flight Deck Control, Flight Deck Debark, and the ship's Medical Department. PRIFLY should land MEDEVAC aircraft in spots appropriate for personnel casualty processing and state their intentions to the appropriate embark/debark command and control stations.

(4) Once the ship receives the MEDEVAC aircraft, casualties will normally be processed and handled as follows:

(a) Once the aircraft lands on the designated spot, two 1 Alpha/Ship's Platoon troop guides approach the rear of the aircraft after receiving authorization from the LSE. The lead 1 Alpha/Ship's Platoon guide signals the LSE to have the pilot lower the aircraft's tail ramp and leads the other guide near the tail ramp so that they might observe the interior of the aircraft. The lead guide positions himself at a safe location adjacent to the side of the aircraft while maintaining visibility of the other guide and the LSE. All wounded troops capable of walking and who require escorts will be asked to stand up via hand and

arm signals. Once they stand they will be escorted to the triage area via the most direct manner. Casualties who remain on the aircraft will be considered as litter patients and the lead troop guide will ascertain the number of litters required and relay this information to Flight Deck Debark. The lead guide will signal and direct the 4-man stretcher-bearer teams to and from the helicopter while keeping the LSE informed of the movements. Only one stretcher-bearer team will enter the aircraft at a time and load the casualty so that the casualty is carried out of the aircraft feet first. Once loaded, they will signal the troop guide that they are ready to exit the aircraft. The lead guide signals the LSE that a stretcher-bearer team is prepared to depart the aircraft. This process is repeated until all casualties have been removed from the aircraft. In those instances where multiple litter patients are unloaded, a second stretcher team can be kept at the foot of the tail ramp in a kneeling position while firmly grasping the litter to prevent it being blown away. The second team boards the aircraft after the first is clear of the ramp. Once the last patient has been carried off the aircraft, the lead guide signals the LSE to raise the ramp and departs the aircraft spot with all of his team members to a pre-determined safety area.

(b) Once the casualty is received at the medical triage/battle dressing station area, medical personnel will administer the appropriate medical care. Medical personnel will also direct the stretcher-bearers on where to place the patient/casualty.

(c) The ship's Master-at-Arms/troop guard will check casualties for ammunition and secure their weapons. The guard force must ensure that a tag or label is affixed to each weapon taken into custody. The tag should include:

1 Rank.

2 Last Name and initials.

3 Branch of Service.

4 Last 4 digits of the SSN.

5 Unit.

(5) Collected munitions products will be boxed, unitized or palletized and sealed. Markings or placards with the essential information of DODIC/NALC, quantities and owning unit will be affixed. It is imperative that both the ship's personnel (Aviation Ordnancemen or Gunner's Mates) and landing force ammunition technicians are present during this process. All collected munitions will be stored in appropriate magazines in accordance with applicable directives/instructions.

(6) Collected weapons will be transferred and stored in a designated location. It is important that this location be identified prior to receiving casualties and published to the Master-at-Arms/Troop Guard personnel.

f. Checklist

(1) Advance Planning and Preparation. Ensure that the following actions are complete prior to receiving and handling casualties on the flight deck.

(a) Communications circuits are tested and functioning.

(b) Stretcher-bearers are properly trained on their duties by the ship's Medical Department. They must also be trained on appropriate flight deck equipment/procedures and the routes that will be used when transporting casualties to and from medical triage areas.

(c) Check the Flight Deck and all of the routes to medical triage/sick bay/battle dressing station areas and ensure that the routes are clear of obstacles.

(2) Execution. Ensure that the following items are accomplished during each evolution.

(a) Prescribed procedures are followed. Deviations from normal procedures must be approved prior to execution and all parties briefed accordingly.

(b) Casualties are handled safely, expeditiously, and efficiently.

(c) Casualties are properly secured and protected from the elements and hazards while being transported.

7. **Loading/Unloading Passengers, Mail and Cargo (PMC).** PMC is an administrative evolution. As such Combat Cargo is required to manage orchestrate PMC loading and unloading requirements since it involves the movement of cargo, vehicles, or personnel via the Flight Deck.

a. Special Considerations.

(1) Coordination with the Ship's Executive Officer, Supply Officer, Chief Engineer, Admin Officer, Post Office and embarked organizations should be accomplished 24 hours in advance. This coordination will allow the combat cargo to determine what ship's personnel, supplies, equipment and mail requires movement via scheduled PMC flights.

(2) If necessary, arrange for a shipboard working party (to include the landing force if embarked) to consolidate and pre-stage mail and cargo.

(3) When deployed, expect daily PMC flights between the various ships. Normally an Air Tasking Order (ATO) is promulgated daily by the TACRON. The ATO consolidates all movement requirements, and outlines the next day's flight schedule. This is a useful tool for forecasting and planning the next day's air operations and for identifying inbound and outbound PMC. Keep in mind that it is the best guess the Air Operations personnel have at the time of the messages release; there will be unexpected and unscheduled movements.

b. Planning and Preparation

(1) Establish liaison with the ship's Department Heads and embarked organizations 24 hours in advance of PMC evolutions. The best way to do this is to attend the Air Planning Board on the large deck amphibious ships.

(2) Monitor the daily Air Plan/ATO and make liaison with the ship's Air Officer for updated flight operations information.

(3) Conduct briefings with key Flight Deck Control personnel, 1 Alpha/Ship's Platoon guides and cargo handlers.

(4) Arrange and designate an administrative muster area for passengers (i.e., hanger, triage area, mess decks, etc.).

(5) Publish required muster times to outbound passengers.

(6) Arrange for a staging area and working party to pre-stage mail and cargo, as required.

(7) Establish inbound passenger control station for shipboard security check, personnel verification, and muster for reporting purposes.

(8) Obtain authorized outbound passenger list from the ATO. Combat cargo should immediately notify the Helicopter Direction Center (HDC) and the TACRON for authorization to load passengers whose

name does not appear on the ATO. The same approval process must be followed if cargo, above and beyond that listed on the ATO, requires transportation.

c. Safety.

(1) Ensure all standard safety precautions are met.

(2) Ensure 1 Alpha/Ship's Platoon guides/cargo handlers obtain authorization from the LSE before moving to or from aircraft with engaged rotors.

(3) Ensure all passengers receive the required pre-flight safety briefing and that they are outfitted with a cranial, float coat/personal floatation device, and goggles (as required).

(4) Ensure that all passengers and cargo are properly screened for FOD hazards prior to their movement to or from any aircraft.

d. Procedures.

(1) Loading a PMC Flight.

(a) Conduct the required safety briefing for all outbound passengers.

(b) Ensure 1 Alpha/Ship's Platoon troop guides obtain inflatable life jackets and cranials for each passenger from the designated PMC helicopter. Ensure outbound personnel don their safety equipment in the proper manner prior to their movement across the flight deck.

(c) Prioritize all outbound passengers, mail, and cargo in accordance with the ship's Executive Officers instructions. Should conflicts arise about the prioritization, combat cargo should highlight the instructions and direct questions to the Executive Officer.

(d) Ensure that all outgoing mail and cargo are properly bagged, boxed, palletized, or unitized. Proper address, labels, markings, or placards must be firmly affixed to mail and cargo.

(e) Ensure the load for each PMC evolution is within the aircraft's operating limits based on the aircraft type and whether it is an administrative or logistics mission. Questions regarding the maximum weight authorized for each type aircraft should be directed to either the ship's Air Operations Officer or the aircraft squadron.

(f) Direct cargo handlers and MHE operators to load unitized and palletized cargo.

(g) Distribute the passenger manifest in accordance with individual ship and existing standard instructions

(h) The standard procedures addressed previously, for loading passengers and cargo onboard aircraft using two 1 Alpha/Ship's Platoon troop guides and qualified/trained MHE operators are also used during PMC operations.

(2) Unloading a PMC Flight.

(a) For maximum safety, at least two 1 Alpha/Ship's Platoon troop guides will be assigned to lead passengers from the aircraft to the designated inbound passenger control station where a security check and administrative processing will be accomplished.

(b) Direct 1 Alpha/Ship's Platoon guides and cargo handlers to offload any hand-carried items.

(c) Direct cargo handlers and MHE operators to offload unitized/palletized cargo.

(d) Coordinate with the appropriate shipboard organizations to pick-up incoming mail and cargo from the designated staging area.

e. Checklist.

(1) Advance Planning and Preparation. Ensure that the following actions are completed prior to each scheduled evolution:

(a) All stations are promptly and adequately manned.

(b) Inflatable life vest and cranial are worn by all personnel.

(c) Communications are adequate and tested prior to each PMC evolution (EMCON permitting).

(d) Routes to and from the Flight Deck are clearly marked and free of obstructions.

(e) Cargo handlers are equipped with properly colored (white) flight deck equipment (cranials, float coats).

(f) Briefings are conducted with all combat cargo personnel as well as Flight Deck Control, aircraft handling personnel, and appropriate ship's Department Heads.

(2) Execution. During the actual execution of PMC evolutions, ensure that the following actions/items are accomplished:

(a) All prescribed flight deck safety and loading procedures are followed.

(b) Communications are satisfactorily tested (EMCON permitting).

(c) Maintain passenger manifests and muster records and ensure status boards reflect current and planned operations.

(d) Passengers proceed in a safe and orderly manner while following the directions of the 1 Alpha/Ship's Platoon troop guides.

8. **Non-Combatant Evacuation Operations (NEO).** Depending on the geographic location and amount of time available for conducting this complex operation, the Flight Deck may be the most expeditious means by which to extract personnel. Although this chapter does not specifically address the NEO, it is imperative that combat cargo personnel review the ship's NEO Bill. Fleet Regulations require each amphibious ship to develop a NEO Bill and to exercise it as a matter of routine. Given the wide variance in shipboard NEO procedures, the CCO should look to this instruction for his definitive tasks, duties, and responsibilities.